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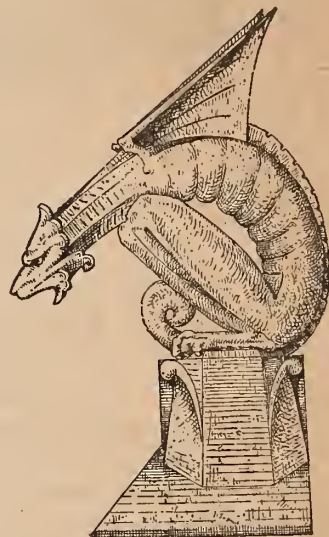
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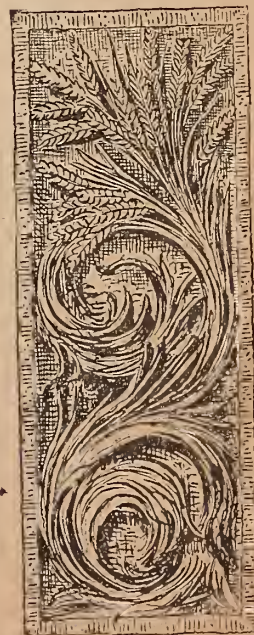
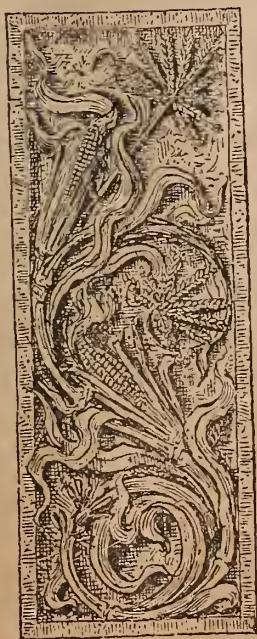
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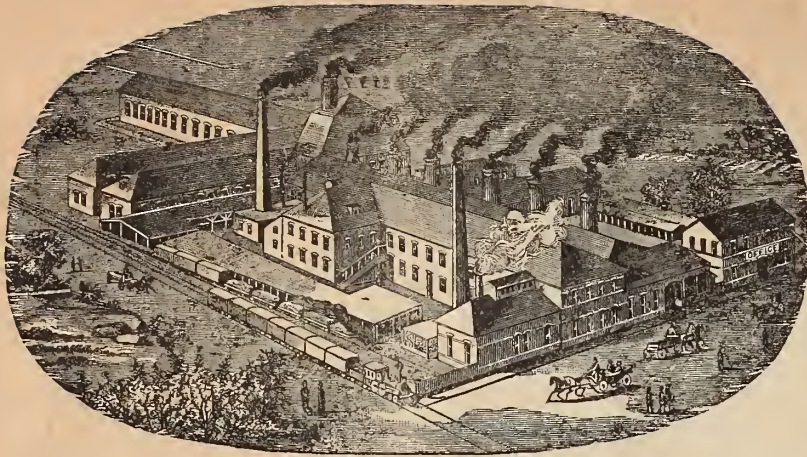
INDIANAPOLIS TERRA COTTA COMPANY

INDIANAPOLIS, - IND.

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U. S. ENCAUSTIC TILE CO.,

INDIANAPOLIS, IND.,

MANUFACTURERS OF

Encaustic and Geometrical Tiles,

FOR LAYING FLOORS IN

**PUBLIC BUILDINGS, BANKS, CHURCHES,
THEATRES, HALLS, VESTIBULES,
DINING ROOMS, BATH ROOMS, ETC.**

Also, Glazed and Enameled Tiles,

For Wainscoting, Hearths, and Interior Decoration.

HIGH ART MAJOLICA TILES FOR MANTLE FACINGS, Etc

Designs and Estimates Furnished on Application.

The manufacture of tile is of very ancient date. Its origin, indeed, is prehistoric. Tile, both plain and ornamental, are found in the ruins of Egypt and Assyria, of Greece and Italy, used for all kinds of domestic and architectural purposes, as well as in some instances for records.

Much of our knowledge of Assyrian history is derived from inscriptions on the tiles and clay cylinders made by the same method. The Romans, particularly, showed great art in their manufacture, and used them extensively. Unlike many articles of antiquity, the tile has held its own throughout the centuries, and has been produced with varying skill and art by many nations, sometimes only for the substantial purpose of roofing or making drains, but oftener for purposes of ornamentation, as shown in hearths, chimney-pieces, mosaic pavements, and wainscoting of houses.

With the comparatively recent revival of interest in household decoration, and especially its development in this country, the tile has leaped into popular favor, and scarcely a house of any value is built into whose construction it does not enter, while there are few possessing any ornaments in which it does not have a representative.

Few processes of manufacture are more interesting or, despite apparent simplicity, more complicated. The utmost care is taken at every stage—in the selection of material and its proper handling, until the finished article is laid upon the warehouse shelf.

The preparation required for the manufacture of tile on a large scale is very great; much costly machinery is needed, many skilled workmen, artistic taste of a high order, both for forming patterns and designing plans for use of the product, added to which there must be great commercial ability to dispose of the wares, and to operate and maintain a large establishment successfully, such a one as is located at Indianapolis, Ind.

Starting with the idea that tiles could be made profitably in this country, and being within easy access of fine clays adapted to the purpose, the Company erected substantial buildings, with kilns and proper machinery, and procured a number of skilled workmen from England. The tiles produced are not excelled by any manufactory in the world. During the past year the Company has entered largely into the manufacture of high-art majolica tiles for mantle facings, hearths, wainscoting and ornamental purposes.

The product of the factory is found in every State, and in hundreds of public buildings. The increasing demand for these goods has made it necessary for the Company to greatly enlarge their works. Recently extensive additions have been made in buildings, kilns, presses and other machinery, until now they cover several acres of ground, and have a capacity of over 2,000,000 square feet per annum.

The Company employ nearly four hundred hands, and expect to double that number during the year. They have just completed two very large contracts, one being the State-house at Des Moines, Iowa, and the other the Custom-house and Postoffice at St. Louis, Mo. Among the many contracts now on hand might be mentioned the new government building at Topeka, Kan.; three court-houses in Indiana, one in Illinois, a large State building at Columbus, O., containing over 40,000 square feet; a large six-story apartment house, also a fine residence, at Cleveland, O.; the Navarro apartment-houses, fronting on Central Park, New York, one of the largest buildings of the kind in the country, and ten national banks located in different parts of the country.

Contractors and builders will find it greatly to their advantage to write to the Company for estimates before purchasing elsewhere.

The Company would solicit correspondence with architects who may desire information regarding prices, and the practicability of using tiles. Designs and estimates will be furnished free upon application.

UNITED STATES ENCAUSTIC TILE COMPANY,

Indianapolis, Ind.

TMP96-024781

THE STATE OF INDIANA.

GENERAL NOTES RESPECTING ITS SURFACE AND EARLY SETTLEMENT.

INDIANA is in form an irregular parallelogram, extending from the southern line of Lake Michigan on the north to the Ohio river and State of Kentucky on the south, and bounded on the east by the State of Ohio and on the west by the State of Illinois. The mean length, from north to south, is 246 miles, and average breadth 156 miles. The area of the State is 33,809 square miles, or 51,636,760 acres, exclusive of its water surface. In the southern portion the surface is somewhat hilly, while the central and north-western sections are undulating and level.

The French explorers of 1702 found this territory a wilderness covered with great forests, and luxuriant grassy plains, and in possession of Indian tribes who lived upon the great abundance of wild game. Immense belts of black walnut, white oak, hard maple, poplar, hickory, ash, and other valuable timber of large growth covered more than three-quarters of the State, while in the north-western section were beautiful undulating prairies, skirted with timber belts along the water courses.

A little over sixty years ago the State, when admitted into the Union of States, in 1816, had a population of only 63,000 souls. To-day the population is over 2,000,000. Less than fifty years ago Indiana had but twenty miles of railway; to-day it has over 5,000 miles, traversing nearly every county. Agriculture, manufacturing and its developments in other directions have kept pace with its growth in population.

POPULATION OF INDIANA,

January, 1820, to 1880, with per cent. of increase.

Year.	Population.	Per cent. of Increase.
1820	147,178	• • •
1830	343,031	133.07
1840	685,866	99.94
1850	989,416	44.11
1860	1,350,428	36.62
1870	1,580,637	24.45
1880	2,052,163	22.10

IMPORTANCE OF ITS GEOGRAPHICAL SITUATION.

The chain of navigable lakes lying along and parallel with the northern border, and the Ohio river and foot-hills of the mountains of Kentucky bounding the State on the south, have naturally marked Indiana as the track of the trans-continental railway system. Across its borders east and west have been built all the great railways which connect the Atlantic with the Western and Pacific States. Here pass eastward upon these numerous lines the mineral and agricultural productions from the richest mines and fields of the continent, and westward the manufactured products of the world. Across Indiana must go not only the exchanges of production but all who are seeking, by observation, a knowledge of the continent. Situated in the center of population, and in the track of commerce and travel, Indiana would be favored indeed did it lack the inherent natural elements of greatness; but in these

it is equally favored. No State in the world has a richer soil, greater extent of superior coal, finer limestone, potters' and fire clay, beds of kaolin and forests of timber, or is better watered. No State produces more wheat or corn (maize) per acre, and none abounds more richly in the grasses.

EARLY HISTORY AND SETTLEMENT.

The rapid increase of population at the admission into the Union was remarkable. It was not the result of chance, but due to the political and natural advantages of the young State.

During the Territorial government, Indiana was a broad skirmish line. War was the rule and peace exceptional. The hardy riflemen from this region and adjoining States were ready at a moment's warning, or, as often without official call, to march against the Indians and their bloody allies. The only roads were the military routes of defensive or avenging expeditions. Soldiers from neighboring States, returning to their homes, were filled with memories of the advantages of the region which they had battled to defend; they recounted to their neighbors marvelous descriptions of the new State, its fertile soil, wonderful production of corn, wheat, oats, etc., and its native grasses, until they and many other emigrants decided to cast their lots in the fields of their late military operations. A majority from the Eastern States embarked in boats from the head-waters of the Ohio, floated with the current to some tributary, up which their barges were propelled by human power alone.

THE EARLY SURVEYS AND SUB-DIVISIONS.

Previous to this time lands had been disposed of by the General Government in large tracts or grants only, the proprietors surveying or sub-dividing the same by irregular natural bounds. Such surveys often overlapped, so that titles were insecure and boundaries not certain. The Government determined to obviate this difficulty by surveying all the public domain before sale under one general system. Two principal meridian lines were established in the State running north and south from some fixed natural point—the first on the eastern boundary north from the mouth of the Great Miami river; the second from a point on the Ohio river 9° 29' west from Washington. These are intersected at right angles by base lines, the principal one for Indiana running west. The country is then divided by lines parallel to the meridians, and base lines into townships six miles square, which are divided by established lines into sections of one mile square, or 640 acres, and these are sub-divided into quarter sections of 160 acres. Such divisions are established by plain marks on trees in the forests, or by posts and mounds in the treeless districts. Ranges are divisions six miles wide, counting east or west from the principal meridian. Townships are numbered north or south from the base lines. At first lands were sold only by sections of 640 acres, but at an early date in the history of this Territory the lands were offered for sale in tracts of 160 and 40 acres. Thus the title to lands was made certain, and at the low price of \$1.25 per acre, farms were within the reach of any one who possessed fifty dollars. This gave a strong impulse to emigration, and was hailed as a blessing by men of moderate means.

SOURCES OF THE GREAT FERTILITY OF THE SOIL.

The fertility of the soil is the surest promise of prosperity. The Central States of the Union are comprised in a great valley. It is the valley of a continent, reaching from the Appalachians well toward the Rocky Mountains. During the glacial epoch a river of ice hundreds of miles in width advanced from the frozen North, planing down the irregularities of the surface, bringing with it immense quantities of bowlders, gravel, sand and clay from the paleozoic and crystalline beds of the North. "It is well known that soil is most productive which has been derived from the destruction of the greatest variety of rocks. From this only is produced the due mixture of gravel, sand, clay and moisture necessary to form a good medium for the retention and transmission of nutritive fluids, be they liquid or aeriform, to the roots of plants." At the close of the "Ice Age," as the glaciers withdrew they left a vast bed of "boulder clay," composed of the comminuted materials of native and foreign rocks from every older strata, covering regions south of the upper lakes, for a space of 200 to 250 miles, to a depth of from 50 to 250 feet.

The soil of Indiana, consequently, is indicated by a mighty growth of giant trees and by the variety and quantity of its fruits and cereals, occupying as it does the heart of this area of ancient alluvion.

The surface of the glacial drift was left nearly level, but has since been modified by fluvial and lacustral agencies, sorting the clays, sands, etc., so as to form generally a loose, friable calcareous loam, deeply covering the gently undulating woodlands, plains and valleys. The great depth of the drift deposit allows it to act as a gigantic sponge, absorbing excess of moisture in the spring or winter, until the long sunny days of summer, thus insuring against any prolonged drought and constituting a superior grazing district. For the perfect growth of grasses a rich soil and perennial moisture is required, conditions which do not prevail in many other States.

THE HOME OF THE BLUE GRASS.

Indiana is the native home of blue grass, *Poa paratensis*—the glory of our rich calcareous soils—an infallible "gold finder." It forms a permanent sward, thickening with age, so that with ten or twenty years the soil will withstand the hoof of heavy bullocks, even in wet weather. It grows slowly under the snow of a cold winter, but bursts into new life with the first genial days of spring, carpets the earth with productive beauty through the summer, and, if reserved for winter, cattle, horses, sheep, etc., may be well kept, except in time of deep snows, on this food alone. This advantageous soil invited the pioneer, and still exists to enrich present and coming citizens.

INDIANA AS A DAIRY STATE.

It is conceded on all hands that no grazing is comparable with the blue grass pastures for the economical production of the best butter and cheese. In this latitude it affords the richest and cheapest food for the production of meat, butter and cheese for about eight months in the year. Indiana is the native home of this grass. It is frequently called Kentucky blue grass, but so far as is known, not a spear of it ever grew in Kentucky till the seed was carried there by the citizen soldiers of Gen. Harrison's army in the fall of 1811. In the eventful campaign against the Indians, which terminated with the battle of Tippecanoe, the horses of the little army almost perished for want of subsistence on the march northward, but when the vicinity of Terre Haute, Indiana, was reached, and the counties north of it, in September and October, 1811, immense tracts of blue grass were found in their natural and

luxuriant state, upon which the almost famished horses were grazed and fattened. Six hundred acres of this nutritious grass were found at the mouth of the Vermillion river, in the northern part of Indiana. This grass was also found in the region of the Tippecanoe battle-ground, and the grazing was good in November, when the battle was fought. The Kentucky farmers, who formed part of Gen. Harrison's army, when the campaign was over, never having seen the grass before, and delighted with its nutritive properties, gathered seed and carried it home with them to the heart of that State, now known as the blue grass region. For a few years they found difficulty in growing it, but soon became abundantly successful in doing so by sowing it with grain crops, and thus shading it from the hot sun. Our Kentucky neighbors prized it highly, and being an older community, realized its advantages sooner for grazing purposes, and thus it became famous as "Kentucky blue grass."

In this connection the late Col. Thomas Dowling, of Terre Haute, Ind., related an anecdote. He was an admirer of Henry Clay, the great commoner. He was on a visit to Mr. Clay at his Ashland home to see his fine stock and his splendid blue grass fields. When about returning to his home at Terre Haute, Col. Dowling said to Mr. Clay that he must take home a souvenir, and that it must be some seed of the famous "Kentucky blue grass." Mr. Clay replied: "Tom, don't make a fool of yourself; you can find blue grass in every fence corner of your county."

Prof. R. T. Brown also found this grass growing luxuriantly in the unsettled and uncultivated Miami Reserve, Indiana, in 1840, where he secured blades of it five feet in length. It is a well settled fact that Indiana is the home of this grass, and what is more, the very heart of it. The natural blue grass region of the West,—of the Union, it may be said,—is a strip of country beginning in Eastern Ohio and extending west some 300 miles. It was a narrow strip in Ohio until it reached well toward the western border of that State, when it widened, and north of the Ohio river it attained its greatest breadth, some eighty miles west and about the center of Indiana. From this point it gently diminished in width till it almost ceased in Illinois. Since its discovery it has been propagated in other sections of the northwest. This State had many thousands more acres of natural blue grass than any other in the Union. Of the soil naturally adapted to its growth, we have in Indiana about 16,000 square miles, or near 10,000,000 acres. In all this region there is the greatest abundance of pure flowing water, either on the surface or under the clay sub-soil and in the gravel beneath it, easily brought to the surface by means of the wind engine. These 10,000,000 acres of land are the natural homes of the dairies of America. The other grasses and the staple cereals are grown and produced here in percentage per acre equal with that of any State in the Union. In the southern sections of the State orchard grass flourishes and is very nutritious. Clover and timothy grow luxuriantly in all parts of the State. The root crops also flourish here, but it has been demonstrated that corn meal is a more economic winter food here, where sixty bushels of corn per acre can be produced. In Sweden, the home of some of the best feeding roots, corn is imported, and at the dairies is fed most economically with the root crops. These incomparable natural resources invite the dairies, and will command them in the order of economy. Whether the surplus products in the States East, where they can not compete, in the mining regions of the West, or in the countries of Europe, where there ever will be a demand, in transportation to either point this State is greatly favored, for all the great highways which penetrate the Nation to the seaboard cross and lead from Indiana. So we have not only the natural, but commercial advantages to invite this great industry. And it will come.

STAPLE PRODUCTIONS OF INDIANA.

Crops of corn (maize) range from 30 to 120 bushels per acre, according to cultivation and management, averaging over 45 bushels per acre. On fair fields corn is often raised by contract at 12 cents per bushel delivered in graneries, the contractor bearing all expense and work. Net profits of crop from \$10.00 to \$15.00 per acre. Wheat ranges from 15 to 64 bushels per acre, averaging over 18 bushels per acre. Expenses for labor, seed, implements, harvesting (with self-binding reaper, now common), and threshing \$6.00 to \$8.50 per acre. Net profit about \$12.00 per acre.

Crops of oats range from 30 to 90 bushels, averaging near 40 bushels. Cost of seeding, harvesting and threshing, \$4.00 to \$6.00. Net profits from \$8.00 to \$12.00 per acre. Meadows produce from 1 to 2½ tons of hay per acre, averaging 1½ tons. Cost of mowing, care and stacking, less than \$1 per ton. Profit from \$10.00 to \$18.00, according to locality of market. Other crops, as potatoes, turnips, sugar corn, sorghum, buckwheat, rye, clover, etc., give good returns.

Apples, pears, peaches, grapes, and the small fruits, and berries are the home production of almost every farm, and so commonly abundant and cheap that none but an expert can afford to cultivate them for market sale.

Timber is too abundant. Not more than one-half the tillable soil has been reduced to culture, according to assessor's returns.

THE GREAT COAL FIELDS.

The Indiana coal fields embrace an area of over 7,000 square miles, offering seven workable seams at a depth ranging from 50 to 220 feet, and averaging 80 feet below the surface. The seams vary in thickness from 2½ to 11 feet, averaging 4½ feet. The quality is fair to good, as shown by analysis in the Geological Reports. An area of 600 square miles in this field yields a superior block, or "splint" coal, which is used in the blast furnace as it comes from the mine without coking. Our block coal is rich in carbon, and remarkably free from sulphur and phosphorus, and well adapted to the preparation of Bessemer steel, etc. The abundance of coal and ease of access cheapen this fuel. It may be had on every line of railway from 5 to 10 cents per bushel, or at \$1.50 to \$2.80 per ton.

THE BEST BUILDING STONE IN THE WORLD.

The State abounds in the finest building stone in the world. By far the most beautiful and valuable stone for architectural purposes is the Indiana Oolitic limestone. The supply is simply inexhaustible, as it lies in massive strata of from 20 to 70 feet thick, over an area of more than fifty square miles. These strata are homogenous, equally strong in vertical, diagonal, or horizontal sections. The stone comes from the quarry so soft as to be readily worked by saw, chisel or planing machine, while on exposure it hardens to a strength of from 10,000 to 12,000 pounds to the square inch—a strength amply sufficient to sustain the weight of the largest structure in the world. In use it presents a handsome, creamy brown appearance, gradually whitening with age. It is of almost unprecedented purity, containing an average of 96.8 per cent. of carbonate of lime, a purity rarely, if ever, surpassed, and scarcely equaled in the world. Hence its advantage over the magnesian limestones, as it is not affected by decay in an atmosphere charged with the gases of burning stone coal. In natural outcrop it presents bold perpendicular faces to the elements, showing every scratch and mark, unaffected after the exposure of thousands of years, as no other stone or rock does. It is quarried in prisoms six by ten, 50 or 100 feet long, putting to shame the boasted prodigies of Egyptian story and effort. It is then rapidly sawed into blocks and dimension forms, and steam planers carve, mold and smooth it like

clay or wood, and more accurately than mallet and chisel. It is now fit to be carved and polished into the finest kind of sculptured and ornamental work.

Ready for the mason or sculptor, it is alive and resonant, answering with a clear metallic ring each touch or blow. This resonance is an excellent test of the perfect unity of its particles, and as a result it is highly elastic, bending under pressure and rebounding to place when relieved from it. This elasticity enables Indiana Oolitic limestone to adapt itself without cleavage or disintegration to changeable climates, where material will be frequently subject to a change of from 20° to 60° of temperature in a few hours; as in large buildings the outside will be subject to a temperature of 25° below zero in winter, or 120° above it in summer, while the inside will remain at 60° or 70°—differences of 50° to 80° in the extremities of the same stone—with their accompanying effects in expansion or contraction. The strains of heat and frost will tear down buildings and sides of mountains with their great expansive forces, and even steel and iron will give way before them. Here, then, is presented to the builder and architect a new and wondrous element in an "elastic stone," a potent quality which, united with its other sterling excellencies of strength and beauty, makes Indiana Oolitic limestone the best in the world for exposed work in buildings in localities subject to great climatic changes. It has been and is now being used in many of the finest public structures in the country. The new \$2,000,000 court-house at Indianapolis, the new State-house, the post-office, and many churches in that city, the Custom-house at Louisville, the City Hall and the water-tables of Lincoln Park in Chicago, many fine structures in St. Louis, the Cotton Exchange in New Orleans, and many public and private buildings in New York and Philadelphia, and the exposed parts of the new State-house of Illinois are built of this stone.

EXTENSIVE RAILWAY SYSTEM.

The State is traversed in every direction by a system of railways which, with steamers on the Northern lakes and the Ohio river, furnish cheap and rapid communication. Many of the common roads are graveled or piked.

LARGEST PERMANENT SCHOOL FUND OF ANY STATE IN THE WORLD.

Indiana has a larger school fund than any State in the world in proportion to population, and schools and intelligence are the safeguard of a free people. Her school fund, school-houses, public buildings, bridges, roads and highways, churches, etc., have been built or constructed by taxation or donation. They constitute an immense commonwealth of accumulated capital, in which every new comer, after a residence of six months, has a share. In some counties this fund amounts to a handsome sum to each acre of land, so that every person securing a farm with us buys with his land an interest in this commonwealth.

GENERAL NOTES AND CONSIDERATION.

In the newer regions of the West and South such public accumulations and improvements are yet to be made. They must be paid for by taxation, and our lands are cheaper from this point of view than farms in less favored regions as a gift.

In recapitulation, Indiana invites farmers to her rich soil, one-half of which is untilled. She has unoccupied fields of enterprise for more. Many branches of agriculture are neglected, as dairying and cheese-making, hop-growing, gathering of clover and other seed and sheep husbandry. To the manufacturer and mechanic she offers cheap, healthy homes, cheap food and clothing, cheap fuel and a good market. To the grazer she offers her native blue-grass and ample returns.

Unimproved lands may be bought at from \$10 to \$20 per acre, and even at lower prices in the south-western part; improved farms at from \$20 to \$60 per acre. With the latter, a practical farmer, who can pay one-fourth of the purchase money down, may, with economy and management, make the deferred payments from the profits of the farm in five years.

Further and more specific reference to the resources, production, commerce, climate, educational and social condition of the State will be found under distinctive heads.

AGRICULTURE.

It has already been briefly pointed out why Indiana is so productive in agriculture. In none of the staple crops has it developed more rapidly than in the growth of wheat. Though population has increased rapidly, it has been shown that increased wheat production has more than kept pace. In 1850 the product per capita was 6.30 bushels; in 1860 it was 12.50 bushels; in 1870 it was 16.51 bushels; and in 1880 had increased to 23.75 bushels per capita. Enterprise has shown that the soil is well adapted to the growth of this cereal, and that the yield per acre will yet be greatly increased. The census statistics of 1880 show that Indiana produces more wheat per acre than any State in the Union. The average area of the wheat crop of the State exceeds three millions of acres. Winter wheat, of the white and amber varieties, are chiefly grown and most productive. Indiana lies in the heart of the winter wheat regions of the United States, and produces about one-tenth of the entire quantity grown in the whole country.

The corn (*maize*) crop is also one of the staple agricultural productions. The great area of alluvial soils is highly adapted to the growth of this crop. The yield per capita has not increased quite so rapidly as that of wheat, but still it has been marked. The bushels produced per capita increased from 52.28 in 1850 to about 60 in 1880. The average area grown in corn annually somewhat exceeds three millions of acres.

The oats crop is also a very productive and profitable one in nearly every part of the State, though a less area is devoted to its growth. An area of 685,000 acres produced 19,615,516 bushels.

Timothy hay is also a profitable crop. An acreage of 984,900 produced 1,599,994 tons.

The Irish potato flourishes in our soil, producing very large crops. An area of 72,936 acres produced 7,264,830 bushels.

Rye, barley, clover, flax and millet are also equally productive in our soils.

The apple crop is a very uniform and productive one, flourishing in all sections of the State.

There are extensive districts in Indiana where the peach crop never fails, and where large yields of this fruit are annually grown. Over four millions of bushels were grown in 1880.

The soil in every section is highly adapted to the growth of grapes, strawberries, and the other small fruits, all of which are grown in great abundance, and find a ready and profitable market.

The apiary and bee-keeping flourish in Indiana. The fields abound in honey plants, and the intelligent management of bees is found to be profitable. The value of honey annually produced is \$240,325.

There are over two millions of acres of grazing lands set in blue grass. The dairy industry flourishes here. There are annually produced something over 121,000,000 gallons of milk, nearly 30,000,000 pounds of butter, and 10,000,000 pounds of cheese for market.

The live-stock industry of Indiana is one of the most important

branches of agriculture, as will be seen in the following numbers annually found in the herds and flocks of the State:

Horses	560,300	Swine	2,180,000
Cattle	1,254,150	Sheep	1,141,000

The value of the principal agricultural productions of the State annually is about \$230,000,000, a large part of which is surplus, and exported and sold to other States and countries.

There are 216,000 farms in Indiana, of which number 161,000 owners occupy them. The remainder are rented for money or for a share of their products. One very important fact is ascertained by the statistics of the State, viz.: that the owners of farms and lands are increasing in number annually, and that the large plantations and estates are being divided up into smaller farms. This fact of increased ownership in the lands and farms speaks much for the citizenship of the State.

The State Board of Agriculture is organized and incorporated by a law of the State, and is liberally supported by the public treasury. Annually Fairs are held at Indianapolis, the capital city, where samples of the State's products and live-stock are put on exhibition, and where thousands of the people of the State assemble to compare experiences in the varied pursuits in farm husbandry.

More than three-fourths of the counties of the State also have incorporated Agricultural Boards, under whose auspices annual Fairs are held during the autumn and fall months. This organized agriculture has given great impetus to agricultural industry in all its varied branches, and affording such excellent opportunity for exchanging experiences, has resulted in great good to the State.

PURDUE UNIVERSITY AND INDIANA AGRICULTURAL COLLEGE AND EXPERIMENT FARM.

The educational privileges of the State are treated of elsewhere under the proper head, but it may be well here to refer to the fact that Indiana has a flourishing Agricultural and Industrial College, well endowed by Congressional grants, and which is also liberally provided for by the State government. Here all branches of agriculture are taught, both theoretic and practical. Connected with the college is a large and well stocked farm, provided with all the machinery and appliances used in agriculture. Extensive tracts of land are set apart for experiments with seeds and plants, and this work is carried on upon a large scale, and the results given to the public through the press and annual reports. The State Chemist is one of the faculty of this college, and a part of his duty is to make analysis of and to determine the relative constituents and comparative value of the commercial fertilizers offered for sale in the State.

The Indiana Agricultural College was organized and formally opened to students in 1879, as a department of Purdue University. In accordance with the plan of organization it embraces two lines of work, viz.:

1. Systematic instruction in agriculture.
2. A continuous series of agricultural experiments.

I.—COURSE OF STUDY.

The course of study at first required three years to complete it, but has been extended to four years and leads to the degree of B. S. It embraces a wide range of subjects, providing an excellent general education in science and English, and giving special prominence to applied science related to agriculture.

Two years are devoted to mathematics, including algebra, geometry, trigonometry and surveying; four years to physical and biological science, including botany, zoology, human physiology, geology, physics and chemistry; four years to the English language and literature; and one year to political and mental scienc

The above-named studies in the agricultural course are precisely the same as in the other courses of the University. It is important to emphasize the fact that the College of Agriculture is not designed to make farmers merely, but broad-minded, intelligent citizens as well. The studies of the course, specially related to agriculture, are as follows:

First Year—Farm crops: Methods of growing, harvesting, curing, improving, etc. Live stock: Character and adaptation of the improved breeds of domestic animals, with critical study of the types of animal form best adapted to the wants of man. Stock breeding: Principles of breeding; laws of heredity; good and bad points in breeding stock; cause of deterioration and means of improvement; value of pedigrees and herd records.

Second Year—Farm implements; Their use and adjustment, merits and defects; care of when in use, and when laid by; means of reducing the draft. Farm management: Economy in the use of materials and labor; relations of fences to the productive operations of the farm; arrangement of farm buildings for economy and convenience; how to utilize the resources of the farm; keeping accounts; hiring help; buying and selling, etc. Shop work: Practice with carpenter's tools in plain wood work. Floriculture: Culture and propagation of flowering plants and shrubs; winter care of plants and bulbs. Vegetable gardening: Preparing the soil; planting, cultivation, harvesting and winter of preservation of vegetables.

Third Year—Veterinary hygiene: Laws of health; symptoms, causes and preventives of diseases; effects of exposure and unwholesome food; effects of ill-ventilated and foul stables; sanitary arrangement of farm buildings. Entomology: Description of insect families, with close study of typical forms of insect life; beneficial and injurious insects; means of preventing or mitigating insect ravages. Meteorology: Relation of climate to agriculture; laws of storms and means of forecasting the weather. Shop work: Practice with blacksmith's tools in plain work in iron. Farm drainage: How to lay out, level and construct farm drains and sewers; how to secure outlets. Landscape gardening: Embellishment of private and public grounds with trees, shrubs, flowers, lawns, drives, walks, etc. Agricultural chemistry: Chemistry of soils and manures; chemistry of plant growth; chemistry of feeding and of the dairy.

Fourth Year—Fruit culture: Propagation, culture, harvesting, storing and shipping of fruits. Forestry: Effects of removing forests; reasons for forest tree planting; trees for various locations and methods of growing the same. Principles of agriculture: Objects of tillage, manures, mulching, draining, irrigation; how to ascertain the conditions most favorable to maximum crop production; how to maintain and improve the fertility of soils. Principles of feeding and drainage: Laws of animal nutrition; feeding rations for young, fattening, milking and working animals; how to most fully utilize the field products in feeding stock; causes affecting the yield and quality of milk; milk setting, and butter and cheese making; utilizing the by-products of the dairy. Economic botany: Noxious and useful plants of the farm, their characteristics, propagation, rate of increase and conditions of growth; time and manner of destroying annual and perennial weeds; cross fertilization and selection of means of improving grains, vegetables, fruits and flowers.

The constant aim of the instructors is to inculcate a love for agricultural pursuits, and to help the students to become successful and progressive farmers. The instruction is made as thoroughly practical as possible; and to this end the experiment farm with its buildings, implements, live stock, crops, orchard and experiment plats, and the greenhouse and campus, are all freely used to illustrate and enforce the teaching of the class room. In addition to

this, and for the same purpose, the agricultural students are taken to see improved herds in the vicinity of the University.

II.—THE EXPERIMENT FARM.

The college farm contains about 160 acres of land known as "second bottom." Every foot of it is tillable and under cultivation. The surface is nearly level, and the soil is a dark heavy loam underlaid by a bed of gravel of great depth, which gives perfect natural drainage. A portion of the farm (100 acres) has a very uniform soil well adapted to field experiments. In 1880 ten acres of this portion was set apart for agricultural experiments. This year about twenty-five acres were occupied with various experiments with wheat, oats, corn, potatoes, etc.

The board of trustees realizing that the usefulness of the farm would be very largely increased by extending the experimental work, have decided that the farm (or such portion as can be profitably used for this object) shall be devoted exclusively to agricultural experiments for the double purpose of benefiting both the students and farmers of the State. This change enables the farmers to combine the large and small plat systems of experimenting. The results of the small plats are taken as indications and made the basis of a test on large plats. To illustrate: Of the 37 varieties of wheat grown last year on small plats, six of the most promising were sown last fall on large plats extending entirely across the field, and in every respect, under ordinary field conditions. The relative value of a certain variety of wheat, e. g., can be ascertained from the small plat; but the actual value of the variety to the farmer can be more accurately determined on this large plat.

Within the four years that the Agricultural Department has been in operation, 45 varieties of grasses and clovers (chiefly small plats for instruction of students), over 50 varieties of potatoes, more than 100 varieties of wheat and oats, nearly 35 varieties of strawberries, about 20 varieties each of grapes and raspberries; several varieties of corn, and 17 kinds of sorghum have been grown comparatively and the results published in the annual reports of the University. Many experiments with fertilizers have been conducted, some of which are not yet completed. Experiments with different rotations are now in progress; also experiments to test the effect, on the soil, of growing one crop continuously, and two crops in alternation. Experiments to test the effect of cultivation on wheat, and on corn in time of drouth, are now in progress. Other experiments of less practical value, but of real interest to students, have been conducted from time to time.

The labor of directing the experimental work has devolved upon the professor of agriculture, whose time, during the school year, has been quite fully occupied with class room duties.

In view of this and the fact that the department has been in operation but four years, it will be seen that a good deal of hard work has been done. A good beginning has been made and the results are already apparent; but the value of the experiments to agriculture will increase from year to year.

MANUFACTURING.

Until the discovery of the immense fields of bituminous coal, manufacturing was but a minor industry. The following table fairly shows the progress of the State in this branch of industry:

	Estab- lish- me'ts.	Capital.	Hands Em- ployed.	Wages Paid.	Value Raw Material.	Value of Products.
1860.....	5,328	\$18,451,121	21,295	\$6,318,335	\$27,142,597	\$42,803,469
1870.....	11,847	62,052,425	58,252	18,366,780	63,135,492	108,617,278
1880.....	12,000	65,742,962	69,508	22,000,000	100,262,917	148,006,411

There are something over 100 establishments in the State which

manufacture agricultural implements. Of this number is the largest plow factory, and one of the most extensive wagon and carriage factories, in the world. Every kind of agricultural implement is manufactured in the State. There are over 1,000 flouring mills, and over 2,000 sawmills for manufacturing lumber. Those engaged in manufacturing, and such as are dependent upon them, number 350,000 souls, whose homes are in every section of the State, and, being consumers of the agricultural products, afford, with other classes engaged in non-agricultural pursuits, a market for a large part of the surplus of the farm. There is a fair proportion of these manufacturing establishments engaged in steel, iron, wood, stone, and plate and other glass industries. Among them is the largest plate glass factory in the United States. Stationary and portable engine manufacturers fill orders for several countries in Europe, and our manufactured machinery has regular customers in France, Belgium, Russia and Australia.

CLIMATE.

The State has a well organized system of weather service, with meteorological observers and reporters in every section, supplied with the necessary instruments and facilities for noting all phenomena. This, together with temperature, barometric changes, rainfall, direction of the wind and aspect of the clouds, are regularly reported to a central office where the facts are tabulated and made public. The following summary will indicate the equable climate of the State. The facts are taken from the observations made at Indianapolis, the capital and center of the State:

Mean monthly temperature for 14 years—

January, 31.3 degrees	July, 77.7 degrees
February, 36.7 "	August, 75.6 "
March, 41.8 "	September, 67.9 "
April, 54.1 "	October, 54.9 "
May, 64.4 "	November, 41.6 "
June, 74.3 "	December, 33.5 "

Annual mean temperature for 10 years—

1865 56.32 degrees	1870 55.25 degrees
1866 56.46 degrees	1871 55.89 degrees
1867 56.33 degrees	1872 52.75 degrees
1868 55.66 degrees	1873 51.15 degrees
1869 52.52 degrees	1874 55.04 degrees

The annual rainfall for 10 was 45.54 inches per year, fairly distributed throughout the year. The facts embraced in these tables were the work of trained and capable men, the result of official observations, and show that our climate is free from the sudden changes which debilitate and weaken vitality, and also insure exemption from epidemics and destructive plagues incident to changeable climate. The precipitation of moisture is remarkably equable. Winter rains and snows are not excessive, and the months of April, May and June, in which vegetation grows vigorously, are, as a rule, well supplied with moisture, and the harvest months of July and August are, as a rule, bright and sunny.

It has been noted by meteorological observers that this State does not lie in the common track of violent storm centers. Cyclones and other meteorological disturbances, such as sweep over the northwest, the coasts of the Atlantic ocean, or the tropical borders of the south, are far less destructive here. This fact has been strikingly illustrated in the past several years.

MINING AND MINERALS.

The State has over 7,000 square miles of bituminous coal fields. A large area of this is block coal, rich in carbon, free from sulphur and well adapted to the manufacture of iron and Bessemer steel. For heating purposes and manufacturing, Indiana coal is not excelled by any in the world. A careful analysis of the two finest bituminous coals in the world, made by thoroughly competent chemists, shows the following results:

COALS.	Fixed Carbon.	Gas.	Water.	Ash (White).	Coke.	Specific Gravity.	Weight of Cubic Foot.	Heat Units.
Indiana Block Coal.....	58.00	37.00	2.50	2.50	60.50	1.227	76.06	80.80
Best Pittsburg Coal.....	58.00	34.00	3.00	5.00	63.00	1.292	80.75	75.05

Thus it is seen that by the above result block coal is a small per cent. superior in heat-producing qualities to the best Pittsburg coal, and as the latter costs 40 to 50 per cent more, our block coal is much more economical for generating steam. Block coal is so free from sulphur that boilers and fire grates will last much longer by its use.

But there was another test of Indiana coal. By an act of Congress Prof. W. R. Johnson was employed to examine and test the relative value of the different varieties of coal, both of Europe and America, in relation to the production of steam. The result of this test was published by the United States. The steam-producing value of each variety was tested by an apparatus which gave the number of cubic feet of water converted into steam in a given time by a given weight of coal. Thus it is seen that the test was not only very practical but thorough. Here in brief was the result of this test:

Indiana coal evaporated per hour 15.05 cubic feet.
Pittsburg coal evaporated per hour 10.56 cubic feet.
Liverpool coal evaporated per hour 13.43 cubic feet.

Experience teaches that in time the coal districts of Indiana must eventually become great manufacturing districts also, for it is cheaper to transport the raw materials for manufacturing purposes to the coal districts than to haul the coal. For a long time London strove to compete with the manufacturing towns in the coal fields, by availing herself of tide-water navigation, the cheapest conveyance in the world, to supply her mills from the Newcastle coal mines. It was a struggle of invested capital against natural advantages; but the contest settled the question of economy, and Manchester, Birmingham, Bolton, Bradford, Leeds and other points in the English coal basin became the center of British manufacturing interests. The coal at hand was indispensable for power, and it attracted the shipment of the raw products of the world for manufacturing. In a very large measure we have had an illustration of this fact in the United States. In numerous instances invested capital has found it more economic to tear down and remove the plants to points convenient to the coal fields. The coal fields of Indiana are in the center of as rich a food-producing region as there is in the world, the soil being very rich and fertile.

The oolitic limestone of Indiana, so extensively used in building all over the United States, has been mentioned in another place, and the enduring quality of it described. An analysis of samples of this valuable building stone from many quarries was made by the chemist of the geological survey of Indiana, and showed the following facts respecting it:

	Gray or Light Colored Stone.
Water expelled at 212° F	0.35
Insoluble silicates	0.50
Ferric oxide and alumina	0.98
Lime	54.10
Magnesia	0.13
Carbonic acid	42.62
Sulphuric acid	0.31
Chlorides of alkalies	0.40
Combined water	0.61

It may be stated that lime and carbonic acid combined give carbonate of lime 96.60. And thus it is seen that this stone is an almost perfectly pure limestone, averaging 96 per cent. of carbonate of lime, a degree of purity rarely, if ever, surpassed, and equaled by very few of the most famous quarries of the world. This stone crops out with bold, perpendicular faces, which record the stand-points of streams through the long ages during which they have been engaged in hewing out of solid rock their deep valleys; even back of this the erosions of the glacial age are seen, dating back to the beginning of quaternary time, supposed by many to have been several hundred thousand years ago. This stone has withstood the elements and their disintegrating action during these long periods, and will fully answer the requirements for permanent structures. The strata are from ten to twenty feet thick, homogeneous and of a similar appearance in horizontal or vertical section, comes soft from the quarry, and is easily sawed, but being tough under the chisel, it may be carved with facility and rapidity into any desired ornamental forms. This oolitic stone may be confidently recommended for the erection of extensive and permanent structures, and will endure any and all climates unharmed for centuries. Great quantities of it are shipped annually to New York and other eastern cities to be used in permanent structures. In some of the palatial residences of New York this stone has been used with excellent effect for interior ornamentation. Extensive quarries of it are found in a large number of the southern counties of the State.

There are also extensive quarries of sand stone, beds of the finest fire clay and kaolin.

The extensive coal fields and stone quarries are as yet comparatively little worked, and are practically inexhaustible. The following figures indicate the present annual demand on them:

COAL, LIME STONE, SAND STONE, LIME, CEMENT AND FIRE CLAY ANNUALLY PRODUCED.

Tons of coal	2,128,000
Cubic feet of lime stone	3,000,000
Cubic feet of sand stone	1,000,000
Lime	1,000,000
Cement	300,000
Fire clay, tons	400,000

The extensive beds of kaolin have been tested and found to be very fine in quality, and the product has been shipped in large quantities to queensware factories in other States.

RAILWAY SYSTEM.

Of the ninety-two counties in Indiana there are but two having no railways passing through them. Few of the States of the Union have a railway system of equal importance to that of Indiana. The geographical position and central location between the Eastern and Western States has made Indiana the leading highway in the carrying trade and commerce of the east and west by its extended railway system. This railway system is an important factor in the

progress and advancement of our people in all the great industries with which the State abounds. The rich agricultural districts, the immense coal fields and extensive areas of building and lime stone are many times traversed by railway lines, affording the most ample facilities for the shipment of our surplus products to all the markets. The great trunk lines east and west pass through the State, and several of the most important lines, with their connections to the Southern sea-board, traverse Indiana. At a glance the extent and value of this great system can be seen by the following figures respecting the fifty-six different roads:

	MILES.	VALUE.
Main track	5,240.91	\$338,459.83
Second main track	60.54	360,800
Side track	925.34	2,599,521
Rolling stock	5,165.53	10,743,250
Improvements on right of way . .		1,318,528
Total		\$53,480,932

This sum of \$53,480,932 is the valuation of the railway property in Indiana, upon which taxes are levied for the support of the State and county governments.

New lines of railways are still being rapidly constructed in the State. During the year 350 miles of main track, and 925 miles of side track were built. During the year over \$600,000 were donated, or voted, in aid of the construction of new lines by counties and townships, which pass through twenty-one counties of the State.

Already the central point of the nation's population, Indiana is also necessarily the pathway of her commerce, and thus becomes an unrivaled center of cheap distribution by her railways, commerce and central position, assuring competing rates and fair prices in all the great industries.

SOCIAL CONDITION.

The educational facilities given elsewhere, together with a brief reference to the social status of Indiana affords fair data for the estimate of the social condition of the State.

There are forty-seven church denominations in the State, and their numerical strength, value of property, &c., are shown by the following facts:

Number of church organizations, 4,942.
Number of church buildings, 4,478.
Total membership, 447,206.
Average annual number of new members admitted, 44,149.
Value of church buildings, lots and other church property, \$10,869,473.
Annual salaries of ministers average \$1,254,631.
Other church expenses annually, \$297,288.
Missionary and other charitable contributions \$188,034.
Number of Sunday-school teachers, 24,161.
Pupils attending Sunday-schools during the year, 259,294.
Average Sunday attendance on public religious services during the year, 430,740.

The State has a system of public libraries in the several townships, and many of the counties have public libraries also. Number of volumes in the libraries, 2,700,680.

The statistical returns show that there are 10,504 pianos and 19,272 organs in the homes of the people.

The people of the State own 240,680 carriages and buggies.

There are 12,981 miles of gravel roads, and about 200 miles are built annually.

Number of banking establishments in the State, 161.

Number of newspapers, 420.

Since 1876 a vast amount of the private and mortgage indebtedness has been paid off, and the people of all classes are in a better condition and less in debt than ever before.

Perhaps there is no better way of showing in brief the true social condition of Indiana than by the following facts:

Value invested in public roads	\$218,865,411 00
Value invested in school and college buildings	15,600,426 00
Value of church buildings	10,869,473 00
Value of public buildings	12,978,420 00
Value of bridges	3,478,200 00
Amount of permanent public school fund	9,271,910 78

These extensive improvements are all completed and paid for, and every new citizen coming into the State has an equal interest in them.

The fraternal and benevolent associations, and life insurance also, may be mentioned as throwing light upon the social condition of the people of the State.

There are 503 Masonic lodges, with a membership of 23,143.

Money invested in Masonic lodge buildings and other property amounts to \$1,405,320.

This fraternity has a system of life insurance among its members, who carry policies amounting to \$20,391,000.

There are 550 Odd Fellows' lodges, with a membership of 25,889.

Money invested in Odd Fellows' lodge buildings and other property amounts to \$1,431,835 05.

This fraternity has also a system of life insurance among its members, who carry policies amounting to \$8,143,000.

There are many other fraternities also having large investments in like property, dispensing large annual benefits, and issuing mutual and fraternal life insurance, the sums of which are large.

The people of Indiana are also holding life insurance in the regular stock companies amounting to the sum of \$78,037,821.

The building fund and safe deposit associations are also very numerous, and are aiding large numbers of people in poor or moderate circumstances to build for themselves homes.

EDUCATION.

By JOHN W. HOLCOMBEE, SUPERINTENDENT PUBLIC INSTRUCTION.

Statistics of 1883 used in this sketch. Those of 1884 will be available for a second edition.]

HISTORICAL.

Legislation. Three enactments of the Territorial Legislature of Indiana, on the subject of education, are recorded. One was passed in 1807, incorporating the Vincennes University; one in 1808, authorizing the courts of common please to lease the lands set apart by the Congress for the support of schools; the other in 1810, providing for the appointment by the courts of trustees of the school lands.

The first constitution of Indiana, adopted preliminary to the admission of the State in 1816, contained this provision:

"It shall be the duty of the General Assembly, as soon as circumstances will permit, to provide by law for a general system of education, ascending in regular gradation from township schools to a State University, wherein tuition shall be gratis and equally open to all."

In the same year the General Assembly of the new State provided for the appointment of superintendents of school sections, to insure the better care and improvement of the school lands. In 1818 an act was passed providing for the appointment by the Governor of a seminary trustee in each county, who should accu-

mulate a building fund from fines and forfeitures. An act of 1824 provided for the establishment of a seminary in each county, and district schools in the several townships. In 1828 was passed "An act to establish a college in the State of Indiana;" and in 1837 "An act incorporating Congressional townships, and providing for public schools therein." The system then established was weakened by an excessive division of functions among numerous officers, by lack of State or county direction, and making nearly every step in matters of taxation and administration dependent upon the votes of the inhabitants of schools districts. These defects were not removed by the "Act to increase and extend the benefits of common schools," approved January 16, 1849. The inefficacy of these statutes soon became apparent, and the present constitution, adopted in 1851, created the State superintendency, renewed the requirement that the system should be general and uniform, and forbade the enactment of local or special laws for supporting common schools. In pursuance of these provisions, a general school law was enacted in 1852, which contained the germs of the present system. After passing through several revisions, guided by a series of luminous decisions of the Supreme Court, it was embodied in the act of March 6, 1865, the last comprehensive statute on the subject of education. This, as amended to date, with a number of supplemental sections and acts—of which the most important are the act establishing the State Normal School (1865) and that creating the county superintendency (1873)—constitutes the school law of Indiana.

Beginnings and Growth of Schools. During the first decade of the State's existence what little educational work was done was the private venture of pioneer schoolmasters, occupying some room or primitive building in a town, or some deserted cabin in the country. About 1825 the county seminaries and district schools began to be built from the public revenues, supplemented by contributions of material and labor levied as a tax upon the citizens. The schools kept in these buildings were maintained by the payment of tuition, but by degrees, as the seminary and Congressional township funds accumulated, small amounts of the proceeds derived from them were apportioned among the schools. By 1837 the General Assembly had incorporated seminaries in twenty-six counties, and many others were organized under the general law. The district schools also spread with the increase of population, and the quality of the the houses improved, the log cabin often giving place to a frame house, and substantial brick buildings appearing here and there. On the reorganization of the school system in 1852, the seminary property was ordered to be sold, and the proceeds turned over to the common school fund. The property was usually conveyed to the new school corporations, and many of the buildings form part of the elegant modern structures which have succeeded them. A few of the better ones remain almost intact to this day, among which may be named those at Brookville, Centreville and Brownstown.

The public educational work was finally put on a firm footing by the increase, in 1865, of the State tax for tuition from ten to sixteen cents on the hundred dollars. Since then the growth of schools has been rapid, and there are now 9,869 school houses in the State, and 13,058 teachers employed.

ORGANIZATION.

The Corporation—The Trustee. The territorial unit of the public school system is the township. The people of each township elect one trustee for a term of two years, to whom are entrusted the general business of the corporation and the management of its schools. The trustee purchases and holds in trust school property, locates and builds school-houses, provides furniture, apparatus and fuel, levying for such expenditures a local tax not exceeding

fifty cents on the hundred dollars. He selects, contracts with and pays the teachers, receiving for this purpose the State's tuition revenue apportioned to his township, and supplementing it with a local levy of not more than twenty-five cents on the hundred dollars. By his authority rules and regulations and courses of study are made and enforced.

Cities and towns are co-ordinate with townships as independent school corporations. Each of these through its common council appoints a school board of three members, which exercises the same powers in the main as the township trustee. In cities of thirty thousand or more population, the school trustees are elected by the people, in numbers varying with the size of the city.

Each country district (*i. e.* the patrons of one school) elects annually a director, who has immediate control of the school property, makes temporary repairs, and exercises a limited authority under the direction of the trustee. But the district is not the corporation.

The County Superintendent. The township trustees appoint a county superintendent of schools, who serves for a term of two years. He examines and licenses teachers, visits the schools, holds county institutes each year, carries out the directions of the county board, receives and corrects the trustees' financial and statistical reports, and exercises a general supervision over the school work.

The County Board of Education. The trustees of the townships and the presidents of the school boards in each county, and the county superintendent of schools as president, constitute the county board of education. It prescribes the text-books which must be used in all the schools except those of cities, makes rules and regulations of a general nature, and determines a policy in matters common to all the corporations. Thus uniformity of administration throughout the entire county is secured.

The Superintendent of Public Instruction. This officer is chosen by the people every two years at the general election. He is charged with a general supervision of the educational administration throughout the State, visiting all the counties for conference with school officers, interpreting the school law, deciding appeals, receiving reports from county superintendents and auditors, and delivering addresses to teachers and the public. He supervises the management of the school funds, and semi-annually apportions the common school revenue among the counties. He makes reports to the Governor and the General Assembly.

The State Board of Education. This is a body of professional educators, the members being the presidents of the State Normal School, University and Agricultural College, the superintendents of schools of the three largest cities, the State Superintendent as president, and the Governor *pro honore*. It grants, upon examination, life licenses to teachers of experience and ability, prepares the questions used by the county superintendents in the examination of teachers, and is empowered to determine questions not provided for by law.

FUNDS AND REVENUES.

The Congressional Fund. This is the proceeds of sales of the sixteenth section of land granted by Congress to the inhabitants of each Congressional township.

It amounts to \$2,469,680.78.

The Common School Fund. This has been accumulated from fines and forfeitures, sales of saline and swamp lands, the State's share of the United States surplus revenue distributed in 1836, certain revenues from the old State Bank, and several other sources. The sources of increase still remaining are escheats and estrays, and fines and forfeitures under the criminal statutes.

It amounts to \$6,802,230.00.

The Total Fund is therefore \$9,271,910.78. A part of it is invested in six per cent. bonds of the State. The remainder is loaned at eight per cent, on real-estate security in the different counties.

The Revenues. The interest on the Congressional fund remains in the townships to which it belongs. The interest on the common school fund is paid into the State treasury, and together with the proceeds of the State tax of sixteen cents on the hundred dollars, is apportioned semi-annually by the State Superintendent to the several counties on the basis of school population. These revenues, with the proceeds of county liquor licenses and local tuition taxes, are devoted exclusively to the payment of teachers' wages.

They amounted for 1883-4 to \$3,154,082.75.

The special school revenue, for building, etc., and current expenses, was \$1,334,878.94.

The total annual revenue was therefore \$4,488,961.69.

TRAINING AND EXAMINATION OF TEACHERS.

The Normal School. The State Normal School gives a thorough pedagogical training, pre-supposing in the student a fair knowledge of the subject-matter of school education.

Teachers' Institutes. An institute lasting not less than one week is held yearly in every county, in which the teachers receive instruction and hear lectures on the science of teaching and methods of presenting the subjects taught in the schools. In every township an institute of one day is held each month of the school year, in which the teachers discuss questions of instruction, management and discipline.

The Examinations. The county superintendent holds monthly examinations in every county, and grants licenses, according to scholarship and ability to teach, for six, twelve, twenty-four and thirty-six months. An eight-years professional license has been created, but has not yet come into use. The State Board of Education grants life licenses, on examination, to teachers of successful experience. The diploma of the State Normal School is a life license. No person without a license can teach in any public school in the State.

COURSE OF STUDY.

The Subjects. The law prescribes that trustees shall cause to be taught in the schools orthography, reading, writing, arithmetic, grammar, geography, history of the United States, physiology, good behavior, and such other branches of learning as the patrons, under certain conditions may demand, or the trustee may deem desirable.

The Classification. The order in which the subjects shall be taken up, and the time to be devoted to each, have been determined by means of courses of study prescribed by local authorities. The county superintendents, in convention in 1884, adopted a uniform course of study for the district schools of the State. It divides the course into five grades—the first and second continuing through one year each, the third, fourth and fifth through two years each. Orthography, reading, writing and arithmetic are begun in the first grade and carried through the course. Geography and language are added in the second, language becomes grammar and history is added in the third, and physiology appears in the fourth.

Graded Schools. Trustees are empowered to establish graded schools, and these present every variety of extension, from township schools of two departments and but one or two subjects additional to the "eight branches," up to the highly organized city system, capped by the high school, in which is given elementary

instruction in science, the higher mathematics, and the ancient and modern languages.

Promotion and Graduation. On completing the district school course, the pupil receives a certificate which admits him to a high school, and on completing the course in a standard or commissioned high school, the diploma then received admits him to the Indiana University, Purdue University, or the State Normal School.

HIGHER INSTITUTIONS.

Indiana University. This institution is located at Bloomington. It is a development from the germ contained in the act of 1828 to establish a college. It has received the fostering care of the Legislature in various statutes from 1852 to the act of 1883, which began the accumulation of an endowment fund of one million dollars. Though it has recently sustained heavy losses by fire, these have to a great extent been repaired, and it possesses the faculty and equipments of a first-class college.

Professors 17, enrollment 300.

Purdue University. This is the State College of Agriculture and the Mechanic Arts, and is located at LaFayette. It was established in 1860, by an act of the General Assembly appropriating the proceeds of the land scrip received from the United States, and accepting a donation in money and land from John Purdue. It is well provided with laboratories, apparatus and machinery, and the faculty is composed of able specialists. The curriculum embraces a thorough English and scientific education.

Professors 11, enrollment 214.

The State Normal School. This institution, located at Terre Haute, was established by the Legislature in 1865, and opened its doors in 1870. It receives liberal support by standing and occasional appropriations, its buildings and equipments are of the best quality, its faculty is composed of trained normal instructors, its growth has been steady and healthful.

Professors and assistants 16, total enrollment 1179, average term attendance 393.

SPECIAL INSTITUTIONS.

Institute for the Blind. This is located at Indianapolis, and was established by an act of 1847. It gives to the blind an excellent literary and industrial education.

Instructors 5, enrollment 120.

Institute for the Deaf and Dumb. This is also located at Indianapolis, and was established in 1844. It offers to the deaf and

dumb similar advantages to those afforded the blind in the institute last described.

Instructors 18, enrollment 377.

Asylum for Feeble-Minded Children. This institution, located at Knightstown, was established in 1879, its purpose being to care for, support, train and instruct feeble-minded children. In it are employed, by skillful teachers, the most approved modern methods of awakening and strengthening the intellectual faculties of this unfortunate class, and imparting to them such instruction as they can receive.

Instructors 3, inmates 87.

Soldiers' Orphans' Home. This Home, located also at Knightstown, was established in 1867. It provides maintenance and instruction for the orphans of Indiana soldiers and seamen.

Instructors 4, inmates 159.

Reform School for Boys. This school, located at Plainfield, was established by an act of 1867. It receives juvenile offenders under the age of sixteen, committed to its care by the courts. It provides elementary instruction in the common branches and in various trades and handicrafts.

Officers and teachers 39, inmates 393.

PRIVATE INSTITUTIONS.

The public educational work is aided and supplemented in every department by private enterprise. All the leading religious denominations maintain academies and colleges, non-sectarian schools are numerous, and private normal schools are a prominent feature in the State.

Colleges. Of these there are seventeen, and their enrollment may be estimated at four thousand.

Normal Schools. Of these there are ten, and their enrollment will not fall below five thousand.

Schools and Academies. Statistics of these are not available, but their enrollment will probably equal twenty thousand.

STATISTICAL SUMMARY, 1883.

Total of permanent funds	\$9,271,910.78
Total annual revenue	4,488,961.69
School population (6 to 21 years)	719,035
School enrollment	500,668
Teachers employed	13,058
Number of school houses	9,869

Established
1850.

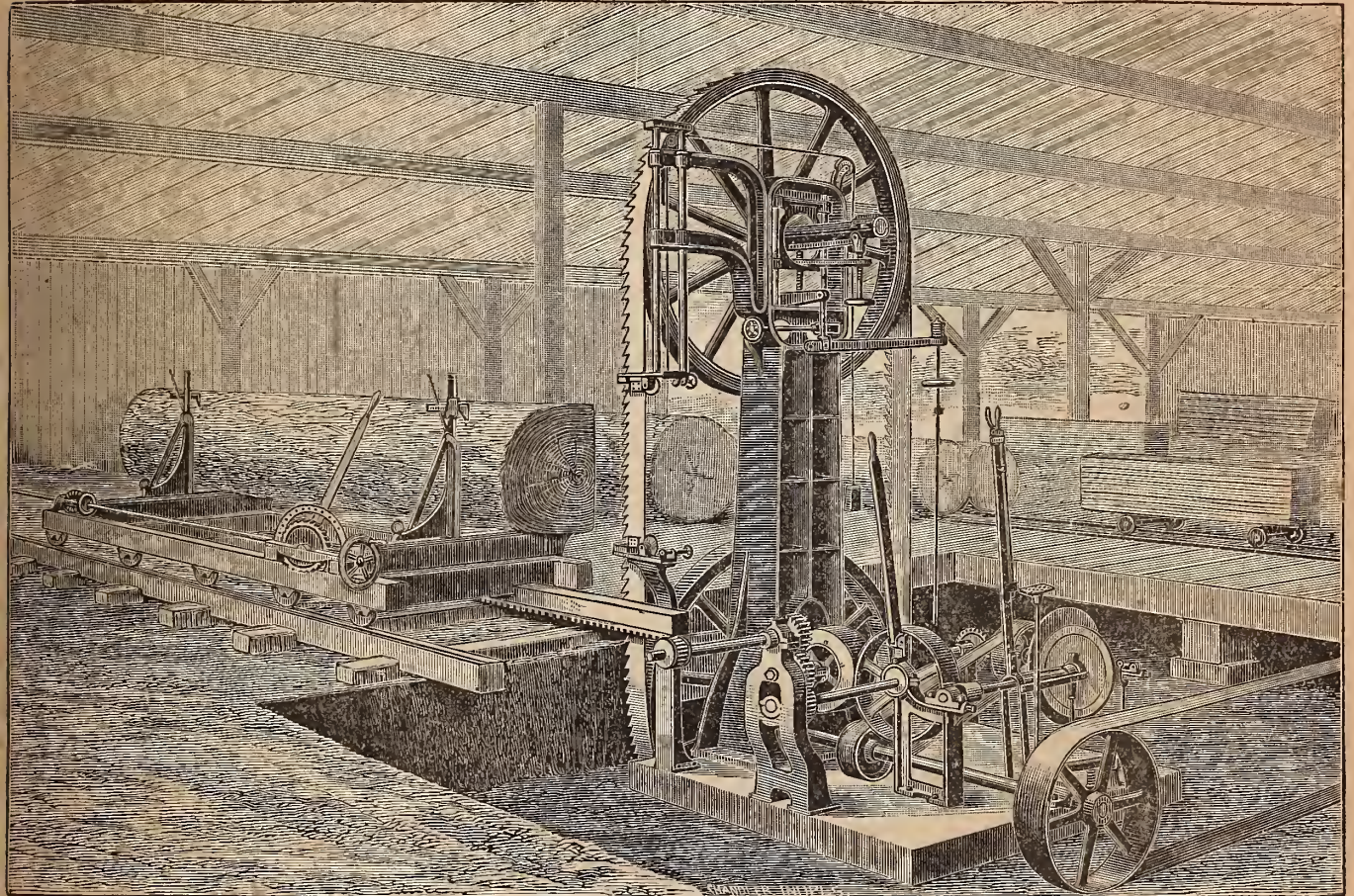
SINKER, DAVIS & CO.,

CAPITAL
\$200,000.

MANUFACTURERS

SAW MILL MACHINERY!

PLAIN SLIDE-VALVE AND AUTOMATIC CUT-OFF ENGINES,
IRON AND STEEL BOILERS,
INDIANAPOLIS, IND.



GOLD-DUST VERSUS SAW-DUST.

THE ECONOMIC QUALITIES of our Band Saw-Log Mills have formed a new era or marked a revolution in saw milling. Owing to thinness of saws used, but $\frac{1}{16}$ kerf is removed, while the average kerf of the circular saw is about $\frac{1}{4}$ inch. This shows a cash saving from the saw-dust pile, or an increased yield in board measure, in favor of the Band Mill, of 1,000 feet in every 6,000 feet of lumber cut. On thin lumber, such as $\frac{1}{4}$, $\frac{3}{8}$, $\frac{5}{8}$ and $\frac{3}{4}$, the increased yield or saving over the circular mill is from 25 to 40 per cent., besides doing smoother work. Our "Gold Dust" Mill will slab a log 84 inches in diameter, and will receive and saw into boards a log that has been squared down to 60 inches; or, in other words, the boards will be fully 60 inches wide and any desired thickness, from one-quarter of an inch up.

The Out-put of these Mills, on average logs, is 15,000 to 20,000 feet of Lumber per day. On large logs will cut 25,000 feet in ten hours.

FIVE POINTS OF SUPERIORITY.

- 1st. PATENT FRICTION FEED WORKS, (no belts, no gears).
- 2d. PATENT PILLOW OR POST, giving three adjustments to upper saw wheel.
- 3d. PATENT ROLLER GUIDES FOR TRAINING SAW.
- 4th. PATENT THROW-OFF HEAD BLOCKS, (no kinking of saw by pulling out of line).
- 5th. COMPOUND EQUALIZING LEVER, insuring uniform tension of saw.

SEND FOR CATALOGUE AND PRICE LIST.

G. H. ZSCHECH & CO.,

INDIANAPOLIS, . . . IND.

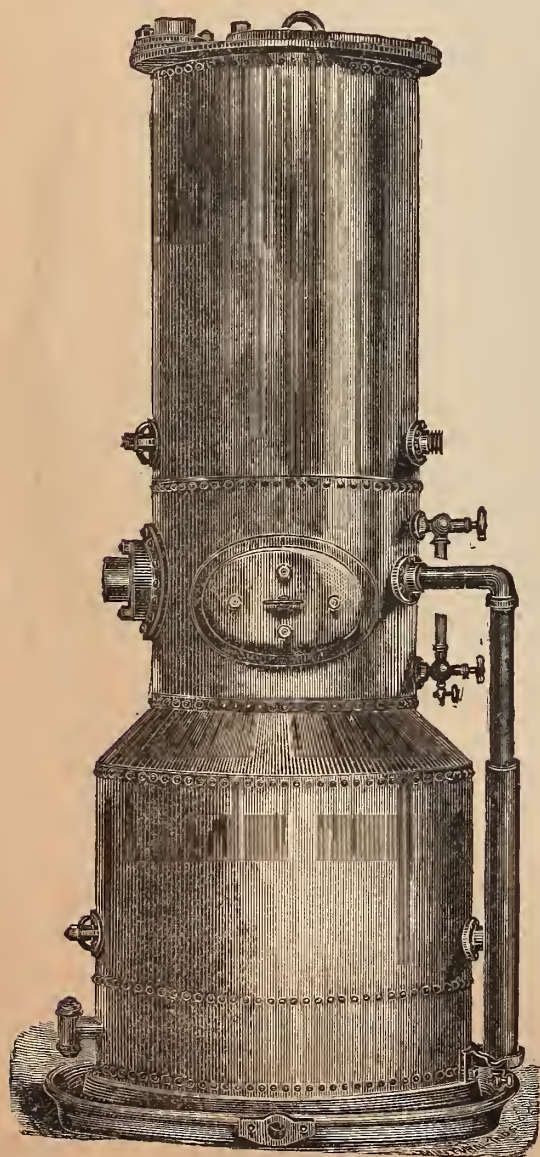
—MANUFACTURERS OF—

LOG BAND SAW MILLS, CIRCULAR SAW MILLS,

Saw Mill Machinery, and the Zschech Celebrated and Improved

FEED WATER HEATER AND PURIFIER.

Patented 1880, 1883 and 1884.



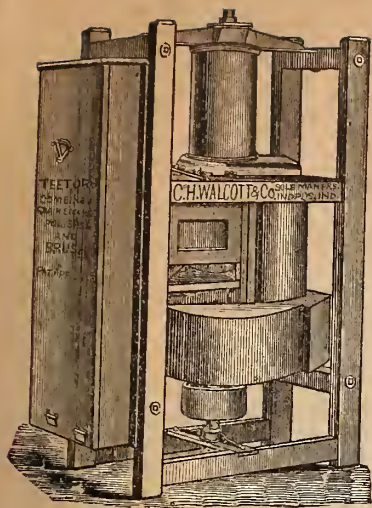
All that can be accomplished by a Heater is to heat water, and to remove all matter held in suspension, by a properly constructed filter, and to precipitate and catch all carbonates and oxides held in solution, and to expel the gases. A properly constructed heater must have the space containing the water in connection with the outer air; or, better still, the exhaust steam should pass through the water; it must be so arranged that it can be easily cleaned, and every part that the water reaches must be accessible, for the very purpose of the heater is to cause the lime and its impurities to deposit; the exhaust in and out of the heater must be ample and free; the water must be exposed to the action of heat, and interrupted in its passage as much as possible, so that the gas may be driven off and the precipitates may have time to settle. If the steam comes into direct contact with the water, the heater must be so constructed that what oil and grease comes in by the exhaust, from the engine, can not pass over into the boiler. It must use nothing but exhaust steam. Whatever heat can be taken from the steam that goes out by the exhaust is clear gain; but if live steam must be used it will add materially to the cost of fuel.

This Heater fills all these requirements. The water is heated at 210° , and a purification obtained that is far beyond that shown by any other heater. It is easily cleaned, and every part is perfectly accessible.

The Heater is built of C. H. No. 1 iron, with castiron removable cones for depositing surfaces, with as many dams as practical to stop the water in its downward flow. The outside shell extends from bottom to top of heater; the inner shell, which forms the chamber two inches wide, is closed below, around the heater, and riveted to the outer shell, and open on top. The lower outside shell extends six inches below the bottom of heater, and sixteen inches above, and closed up in cone-shaped form.

For further Description, Terms, &c., Address

—G. H. ZSCHECH & CO.,—
INDIANAPOLIS, IND.



C. H. WALCOTT,

MANUFACTURER AND DEALER IN

GRAIN CLEANING MACHINERY,

»DUFOR & CO'S. CELEBRATED«

Bolting Cloth and Grit Gause a Specialty.

79 to 85 South Pennsylvania St.,

INDIANAPOLIS, - - IND.

A NEW DEPARTURE IN GRAIN CLEANING.

—TEETOR'S—

COMBINED SCOURER, POLISHER & BRUSH.

Until within recent years the process of properly cleaning wheat has received very little attention in comparison to the attention that the importance of the subject demands. There is indeed no part of the milling process that is of greater importance than that of wheat cleaning. Also this must be done at the proper time, as there is a natural order or routine in which the different stages in the manufacture of flour must follow, as to depart from the natural order means a loss in the quality or quantity, or both, of the flour product. Thus the first step after the wheat is in the bin is the important work of cleaning. The next step is its reduction and the next the separations, &c.

But the subject with which we are content to deal here, is the first—the wheat cleaning, and not to be tedious in our circular, we solicit an examination of the principles and operation of the Teetor Combined Scourer, Polisher and Brush, which, after a continual use of nine months, is assured to accomplish most thoroughly and efficiently this step of milling. Now, as to the condition of the grain while undergoing the scouring and polishing process, allow us to add that the wheat enters a chamber through which it is allowed to pass only in a compact mass, and in this condition is thoroughly agitated and ventilated, one grain rubbed against another. This condition assures that the scouring surface always remains the same, since it is furnished by the wheat being cleaned. Thus also, when the wheat is rough and hard it has similar scouring surroundings; but when the wheat is soft and more easily injured, it is again subjected to a scouring process of suitable severity.

—THE—

OGBORN GRAIN SEPARATOR

Is Undoubtedly the best in the World.

WHAT WILL IT DO?

It will separate the seeds and grain as follows:

First, The largest and finest Wheat for Seed, free from other seeds and every impurity.

Second, The smaller grains of Wheat well cleaned.

Third, Grass Seed perfectly clean.

Fourth, Cockle, cheat, and other refuse.

Fifth, It separates and cleans Timothy and Clover Seed. The four different seeds and refuse are deposited in separate measures or piles.

Sixth, A small boy can run the machine and separate 50 to 60 bushels per hour.

Refer to C. H. WALCOTT, Manufacturer,
Indianapolis, Ind.

REGISTERED JERSEY CATTLE

BRED AT

 Beech Grove Farm 

AND IMPORTED FROM ISLAND OF JERSEY.

OXFORD DOWN SHEEP,

Berkshire Sheep & Fancy Poultry.

F. M. CHURCHMAN and GEORGE JACKSON, Proprietors.

Post-Office Address, - INGALLSTON, Marion Co., Ind.

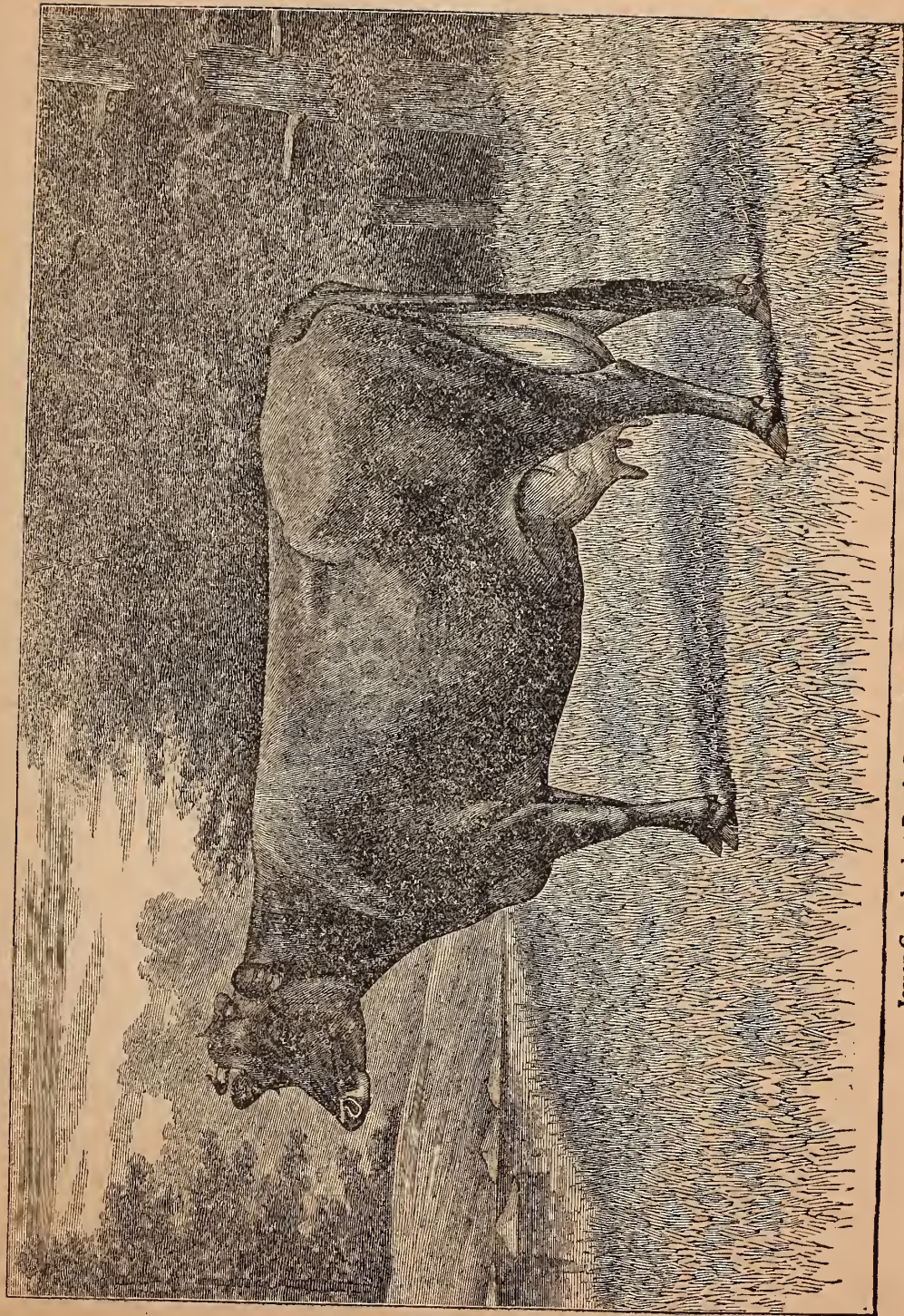
IN presenting this sketch to our patrons, we return sincere thanks for the liberal encouragement received in the past, and hope by renewed effort, a judicious exercise of good judgment, the result of a long and careful experience in the business, to be able to produce results in breeding that will insure for our customers the most entire satisfaction.

The herd was founded in 1869, and selected with the greatest care, no expense being spared to secure the *best* animals of the breed, butter and cream product of the ancestry, through a long line, being made a first consideration. This course we have adhered to at every step. In selecting males for the leadership of the herd, the first inquiry has always been, "What of his ancestry for butter product?" All the bulls used have descended from families noted for their persistence in milk, rich cream and butter yield. The results are that rich qualities are transmitted from one generation to another with unfailing certainty.

In making our selection, we were assisted by the combined judgment and experience of J. Milton Mackie, Esq., President, and Colonel George E. Waring, Secretary, of the A. J. C. C. No care, time or expense was spared to procure fineness of quality, our object being to bring over the *very choicest* specimens the Island of Jersey could produce. The results of this care have proven of the *most satisfactory character*. We bought *only* of the most reliable and careful breeders, selecting from their herds the best specimens, in many instances having to pay high rates for this privilege. But we considered all other things secondary to rich and fine breeding. We are very much gratified to be able to say that in no one instance has any of these animals disappointed us, and many of them have proven extraordinary in their richness. Many of them were prize-winners on the Island, and selections from them *here*, at some of our leading fairs throughout the West, have obtained the highest honors both singly and in herds. They were selected with the one great object in view of fine and full development of the milk organs and of the escutcheon, taking into consideration these important qualities in their ancestry.

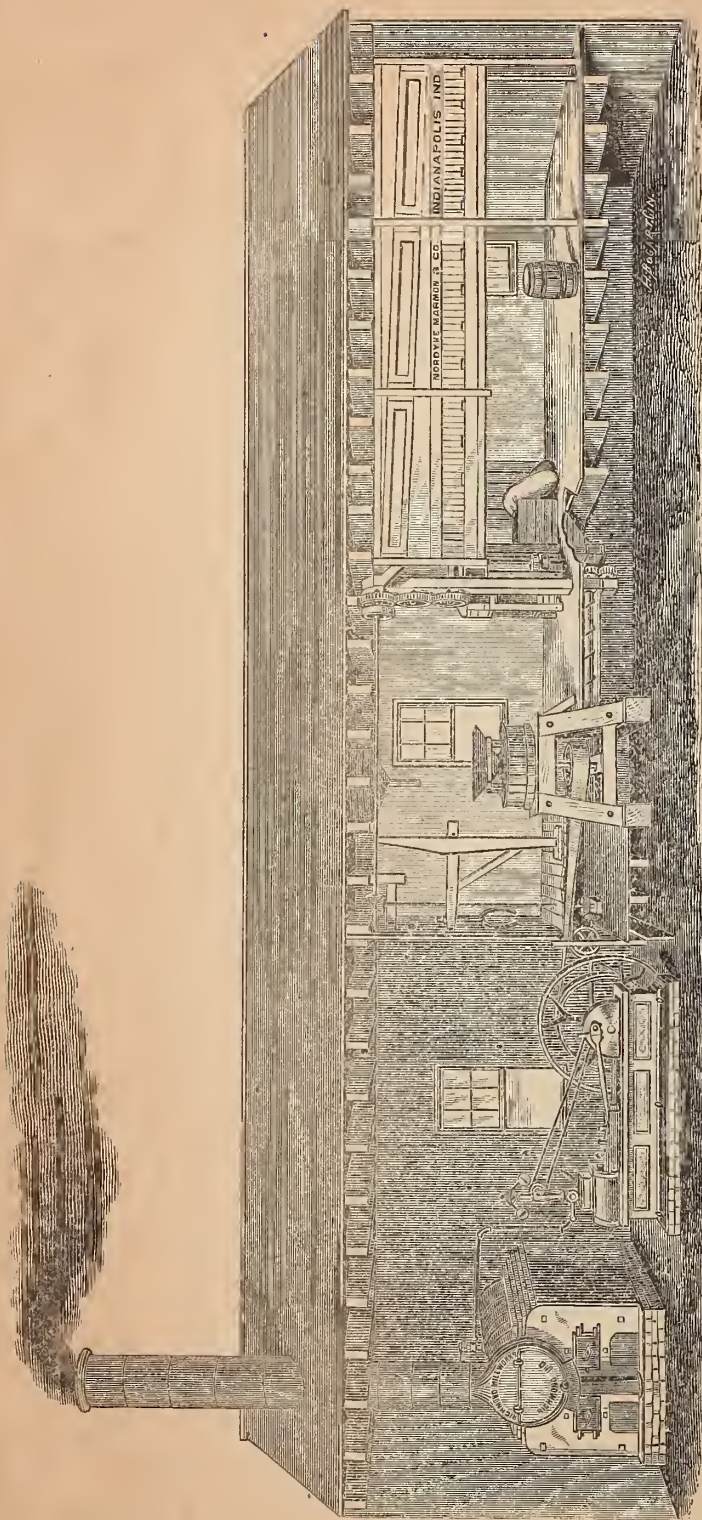
"Snap," the prize bull of the year, was secured at a long price, as leader of the herd, and he is now justly celebrated as one of the richest and best sires in America.

The numbers in the pedigrees of the Imported Animals correspond with those found in the Island of Jersey Herd Book.



Jersey Cow, bred at Beech Grove Farm, Ingallston, Marion County, Indiana.

CUSTOM MILL OUTFIT.



This engraving is intended to illustrate the different methods of arranging machinery for custom mills, as manufactured by Nordyke & Marmon Co., of Indianapolis, Ind. The stones we furnish are of a variety of sizes. For wheat grinding the most common sizes are 20, 30, 36, 42 and 48 inches. For corn grinding we make 14, 18, 20, 26, 30, 36, 42 and 48-inch stones. We have also arranged to embody in the several parts of these mills, particularly the bolt chest, such improvements as are found in our largest new process mills, making them capable of turning out flour that will stand inspection in any market, at the same time a good yield, and as economical in the use of power as a mill can be. One miller and engineer can easily operate one of these mills, and with a given capacity of from one to two hundred bushels per day, allowing $\frac{1}{6}$ or $\frac{1}{8}$ toll, the net profits can be easily ascertained. You get your pay as you go, and after summing up, we know that in our fast growing country no better investment can be made than the purchasing of one of Nordyke & Marmon Co's. improved mills. They are furnished at a price so reasonable that every neighborhood with sufficient demands should not be without one.

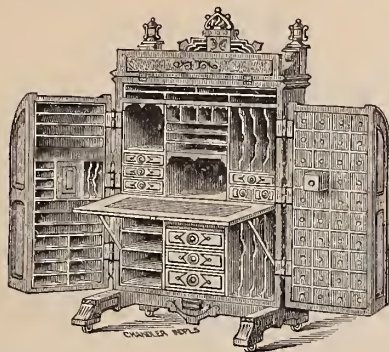
The driving power of this mill is a 10x16 slide-valve engine, making 150 revolutions per minute. The power required to drive the mill is about 25 H. P., though the engine will easily give 10 H. P. more. In running the mill for 10 hours the fuel required will be about 1,000 lbs. of steam coal or about one cord of good wood. Water power can be used to drive this mill, in place of the engine where required.

The mill consists of 2 run of Old Stock French Burr Millstones, one used for grinding wheat and the other for grinding corn and feed. The stones are driven by $\frac{1}{4}$ turn belt from line shaft, and either may be stopped or started, without stopping the engine. The stones rest on a Wood Hurst Frame, and are covered by walnut finished curbs, the wheat stone having a silent feeder and the feed stone a hopper, shoe and damson. The spindles are of cast-iron, *cast on end*, and the trampots, what are known as copper lined top lift. The bolts, elevators and smutter are driven from an upright shaft, which is geared to the line shaft in basement by bevel mortice or core gears and pinion with dressed teeth. This shaft rests on a heavy steel step and is supported at each floor by boxes. The main line shaft in basement is coupled direct to engine shaft, and supported on a line of posts, by bracket boxes. The smut and separating machine stands on top of the first floor. The bolting chest stands on same floor and contains one reel 32 inches diameter and 18 feet long, with double conveyors, and is driven by upright shaft and mitre gear, from line shaft in attic. There are three elevators in

the mill. The wheat is taken in wheat hopper on grinding floor, and passed into the foot of the wheat elevator, which takes it up into the attic and spouts it into the smut and separating machine, from which it passes direct into the stock hopper over the wheat stone. The meal from the wheat stone is spouted into an elevator and taken to the bolts. The corn or feed is taken into a hopper on grinding floor and elevated into stock hopper over feed stone, and the ground feed elevated into a feed bin on second floor from which it can be drawn at pleasure. With the addition at any time of another $\frac{1}{2}$ chest of bolts, a middlings purifier, a set of rolls to grind the middlings, and a set of smooth chilled Iron Rolls for extracting germs, this can be made a *high grinding New Process Mill*. The power provided is amply sufficient. A few more elevators would be required and the change made very easily.

Detailed specification and prices furnished on application.

THE DESK OF THE AGE!



THE + WOOTON

—PATENT—

Cabinet Office Secretary.

THE BEST OFFICE APPLIANCE IN THE WORLD.

A REMARKABLE SUCCESS.

THIS celebrated appliance was patented and introduced to the public in October, 1874, since which it has found its way into all portions of the civilized world.

It has had a large sale in Great Britain, France and Germany, and orders have reached us from the remotest countries on the globe. South America, Mexico, China, Japan, India, Egypt, Turkey and Australia have all paid tribute to its superior merits.

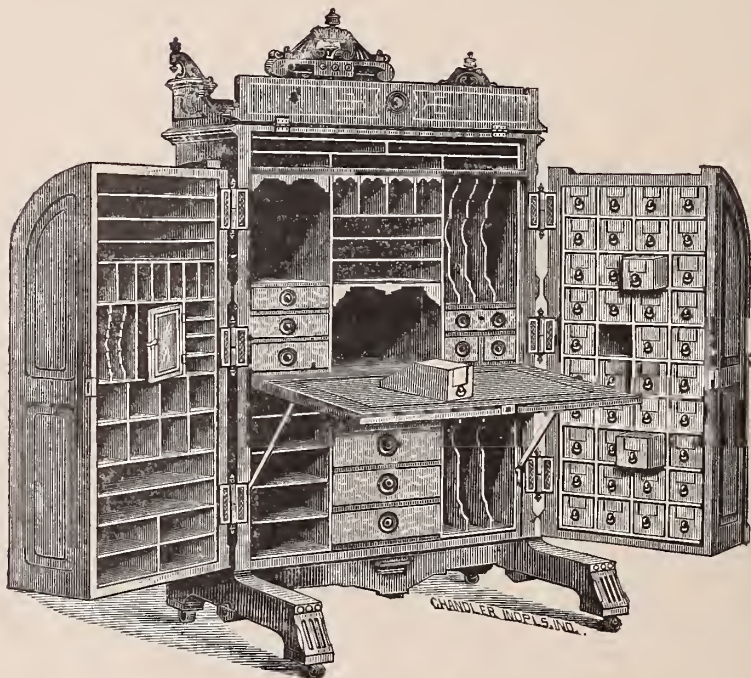
Wherever presented, at home or abroad, it has at once commanded the admiration of the best business classes, and has spontaneously elicited from these the appellation of THE DESK OF THE AGE. Nor has this title been accorded it without most excellent foundation. Considering its wonderful conveniences and its admirable adaptation to all classes of business, any less encomium would fall short of the praise to which it is fairly entitled.

HAYNES, SPENCER & CO.,

Richmond, Ind., U. S. A.

ERIE DISPATCH PRINT.

—THE—
Wooton Cabinet Office Secretary.



“STANDARD” PATTERN.—Open.

One hundred and ten compartments, all under one lock and key.

(The interior arrangement of the SECRETARIES is precisely the same in each pattern and size.)

EVERYTHING that ingenuity can suggest or devise to facilitate desk labor, has been introduced in our SECRETARY. Its design is altogether original and unlike that of any other office appliance. As a result of its ingenious construction, a much greater capacity is secured for it than is to be found in any other desk occupying the same floor space. Its comprehensive character is such that ample accommodations are afforded for the requirements of the *most voluminous business*. Every facility is furnished for a thorough and systematic classification of books, papers, memorandums, etc. Through its aid the usual fret and worry of office work is converted into a positive pleasure. It is a *MINIATURE COUNTING-HOUSE*, with a combination of such conveniences as are found best adapted for the manipulation of office work, and these *all under one lock and key*.

With this Desk a man absolutely has *no excuse for slovenly habits* in the disposal of his numerous papers, and the man of method may here realize that pleasure and comfort, which is only to be attained in the verification of the maxim, “*a place for everything, and everything in its place.*”

The operator having arranged and classified his books, papers, etc., seats himself for business at the writing table, and realizes at once that he is “*master of the situation.*” Every portion of his desk is accessible without change of position, and all immediately before the eye. Here he discovers that perfect system and order may be attained, confusion avoided, time saved, vexations spared, dispatch in the transaction of business facilitated, and peace of mind promoted in the daily routine of business.

Nothing in its line can exceed it in usefulness or beauty, and purchasers everywhere express themselves delighted with its manifold conveniences.

(See details next page.)

DETAILS AS TO CONSTRUCTION

OF THE

Wooton Cabinet Office Secretary.

THE SECRETARIES are constructed of the best seasoned material, (Black Walnut, Cherry, Oak and Mahogany,) are solid and compact and *designed for the use of a lifetime.*

The body of the desk is solidly built up, and rests upon projecting feet, as shown in the cut; these are mounted on heavy rollers, so the Desk can be readily moved at will. The wings are attached to the body by means of three pairs of *extra heavy butts*, which are made for the purpose and *capable of sustaining great weight.* The lid at the top of the Desk *folds down*, and when the Desk is closed the doors rest against the front side of this lid, holding it in place. When the operator desires to close his Desk he has only to place the work before him in its appropriate place, *turn down* the lid at the top, *swing up* the writing-leaf and close the doors. The turning of the handle-knob of the right hand door locks the three pieces firmly in an ingenious manner, and the whole thing is accomplished in a few seconds.

The No. 2 SECRETARY, (the most popular size,) has an inside measurement of—height, four feet; width, six feet. Here, then, is a face surface of twenty-four feet. With this space practically utilized, it will readily be seen what conveniences may be secured.

1. There are forty pigeon-holes in the right hand wing, filled with our patent filing boxes. Here forty files of papers and letters may be kept (free from dust and intrusion,) all within reach of the operator as seated at the table. These filing boxes are made with a slot or groove for the introduction of labels, which may be changed at any time, without mutilating the boxes by the usual process of pasting. This set of boxes is one of the *special features* of the Desk, and reference only is needed to such an important acquisition, to be appreciated by all whose business requires such accommodations

The writing-leaf is supported by automatic braces, which fold up (when the leaf is closed) against the inner edge of the Desk. These braces rest beneath, on thumb screws, which can be raised or lowered as wished, thus securing any desired slope of the table—or, if preferred, the table may be made perfectly level.

2. There are ten drawers in the body of the Desk for such additional papers and memorandums as it may be necessary to occasionally refer to—four of these (the largest beneath the table) being designed for stationery. At the top of the Desk are shelves, stretching across the whole width, for the accommodation of large blanks, legal, foolscap and letter paper. This has been found a valuable feature. Eleven spaces or racks, of different dimensions, for books; also, a large space over left hand drawer, in the body of the Desk, for books of reference, etc., and a large opening between the smaller drawers for ink-stands, pen-rack, pencils, pens, etc. The remaining portion of the space is divided into shelves, racks, etc., of such varied dimensions as are found to best accommodate miscellaneous invoices, bills of lading, blanks, letter clips, and memorandums of different forms and shapes.

3. In the centre of the left hand wing will be found a small hinged door, which opens toward the writing-leaf. This discloses a letter-box, which has an opening on the outer face of the Desk, where a bronzed spring letter-plate is introduced. This has been pronounced a great convenience, as the user of the Desk can here have his mail matter dropped during absence, where it remains free from intrusion until his return.

We have recently added a Yale Lock to the upper right hand drawer above the table, and have introduced a plate-glass panel in the door of the letter box, so the contents may be discerned without opening. Also small pencil drawers on each side, above the ink space.

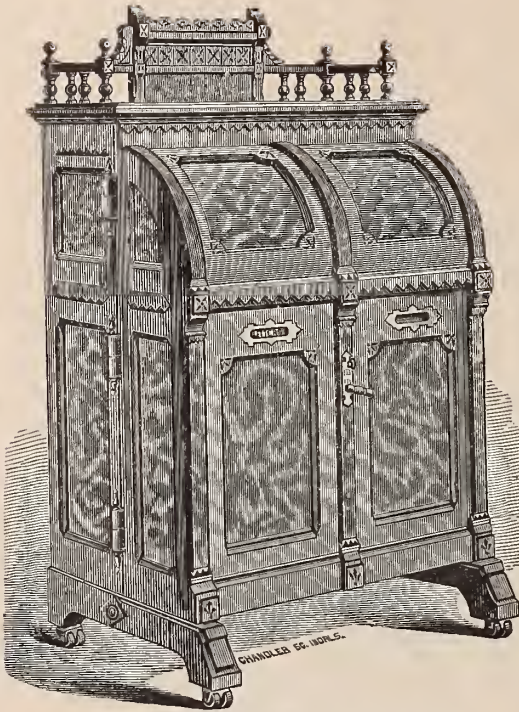
The SECRETARY is made in three patterns, the "Standard," "Queen Anne," and "Extra," each pattern being produced in three sizes. The interior arrangement is the same in each pattern, and as represented in the cut on opposite page. Two cuts are given on the outside page showing exteriors of the "STANDARD" and "QUEEN ANNE" patterns. The Desks are elegantly finished, backs handsomely paneled, and may occupy any position in a room or office with fine effect.

Details as to finish, and measurement of the various compartments, together with prices sent on application, by

HAYNES, SPENCER & CO.,

RICHMOND, IND., U. S. A.

Large cuts of the Secretary (10x12 inches) furnished when applied for.



"QUEEN ANNE" PATTERN.



"STANDARD" PATTERN.

THE WOOTON Cabinet Office Secretary.

Elegance of Design

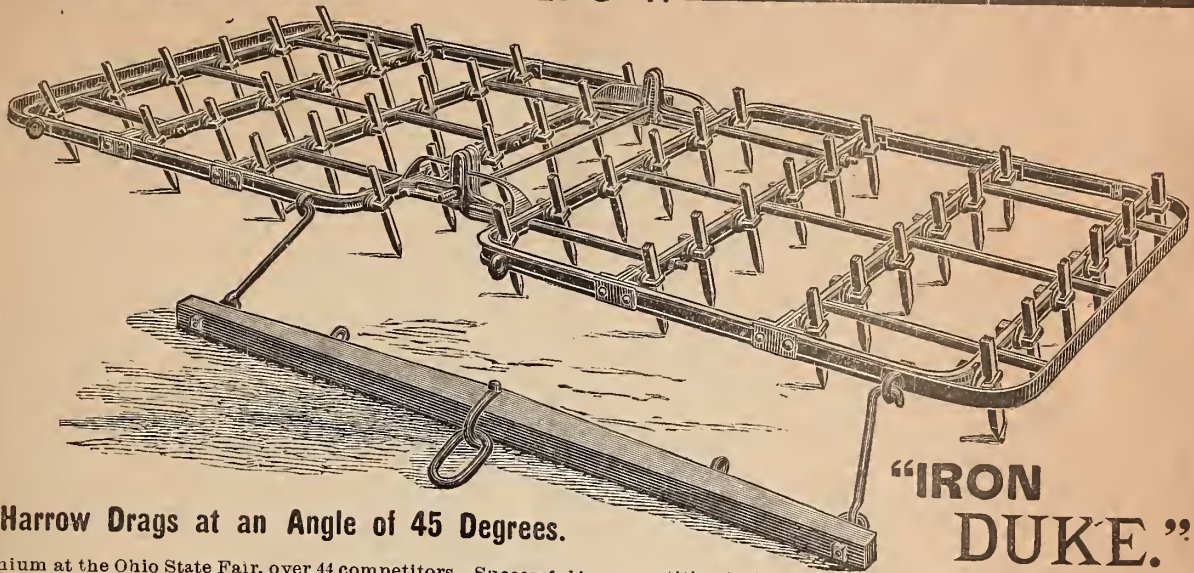
—AND—

PRACTICAL WORTH COMBINED

EVERYWHERE regarded an elegant piece of furniture. Whether open or closed, its graceful proportions are alike pleasing to the eye and a source of gratification to the possessor. It is a universal favorite as an adornment for either office, library or drawing room. As an ornament for the home it has found special favor. It combines an elegance of appearance with practical worth as a repository for many things which have not heretofore found an appropriate receptacle in the household. Such articles as it may be desired should have a place where they can be readily referred to when needed, and yet not accessible to the general visitor; such as unframed engravings, prints and chromos, stereoscopic views, unbound serials, coin and mineral collections, books and papers of a private character, family relics and valuables of the usual variety found in the homes of thousands of well-to-do people throughout the country. Here they may be deposited under lock and key until required, when they can be referred to with facility.

WE OFFER FOR SALE THE VERY BEST HARROW IN THE MARKET.

LIGHT,
STRONG,
DURABLE.



Harrow Drags at an Angle of 45 Degrees.

"IRON
DUKE."

First Premium at the Ohio State Fair, over 44 competitors. Successful in competitive test at Xenia and Dayton against 12 and 14 of the leading Harrows. 1. It is the strongest Harrow made. 2. The teeth can be set at any angle, either forward or backward. 3. It will not clog, as the teeth can be set to suit the conditions of the soil. 4. You can use one, two, three or four sections, each section being four feet wide. 5. It is perfect in its construction. 6. Its flexible hinge accommodates the Harrow to the inequalities of the ground. 7. Its teeth are readily reversed, keeping them always self-sharpened. 8. It will do more perfect work in one harrowing than any straight-tooth Harrow will in two. 9. It is a perfect smoothing Harrow, for cultivating corn when small. 10. The teeth being adjustable, there is absolutely no tracking of one tooth after another. 11. The teeth are steel and can be used down till only 2½ inches long. 12. It can be arranged so as to be moved through gates, hars, or any place with the same ease of a sled. 13. It has more advantages than all other Harrows combined. Special attention given to inquiries. Write for prices, terms, etc.

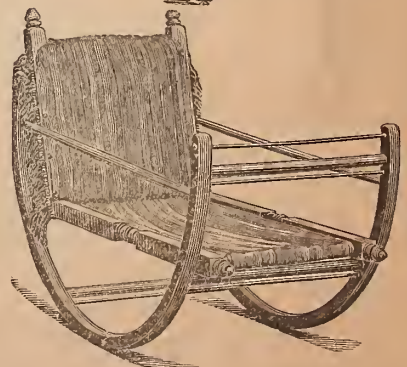
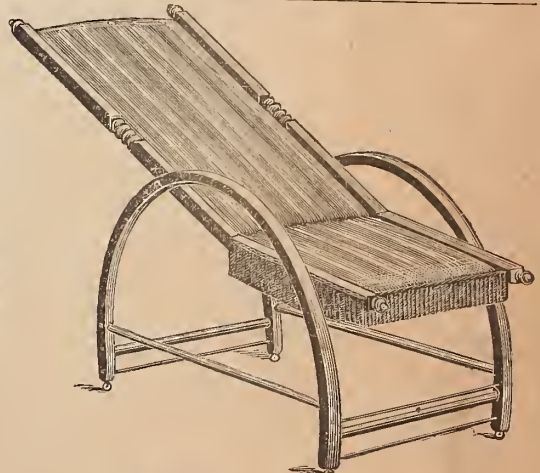
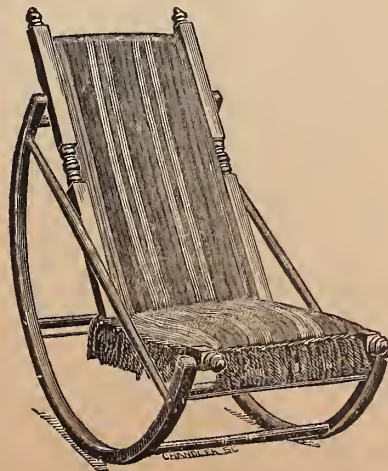
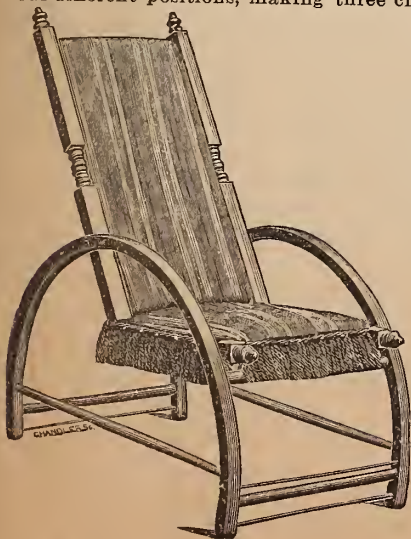
Manufactured only by KIMBERLIN MANUFACTURING COMPANY, INDIANAPOLIS, IND.

PRESTON'S Combination Chair.

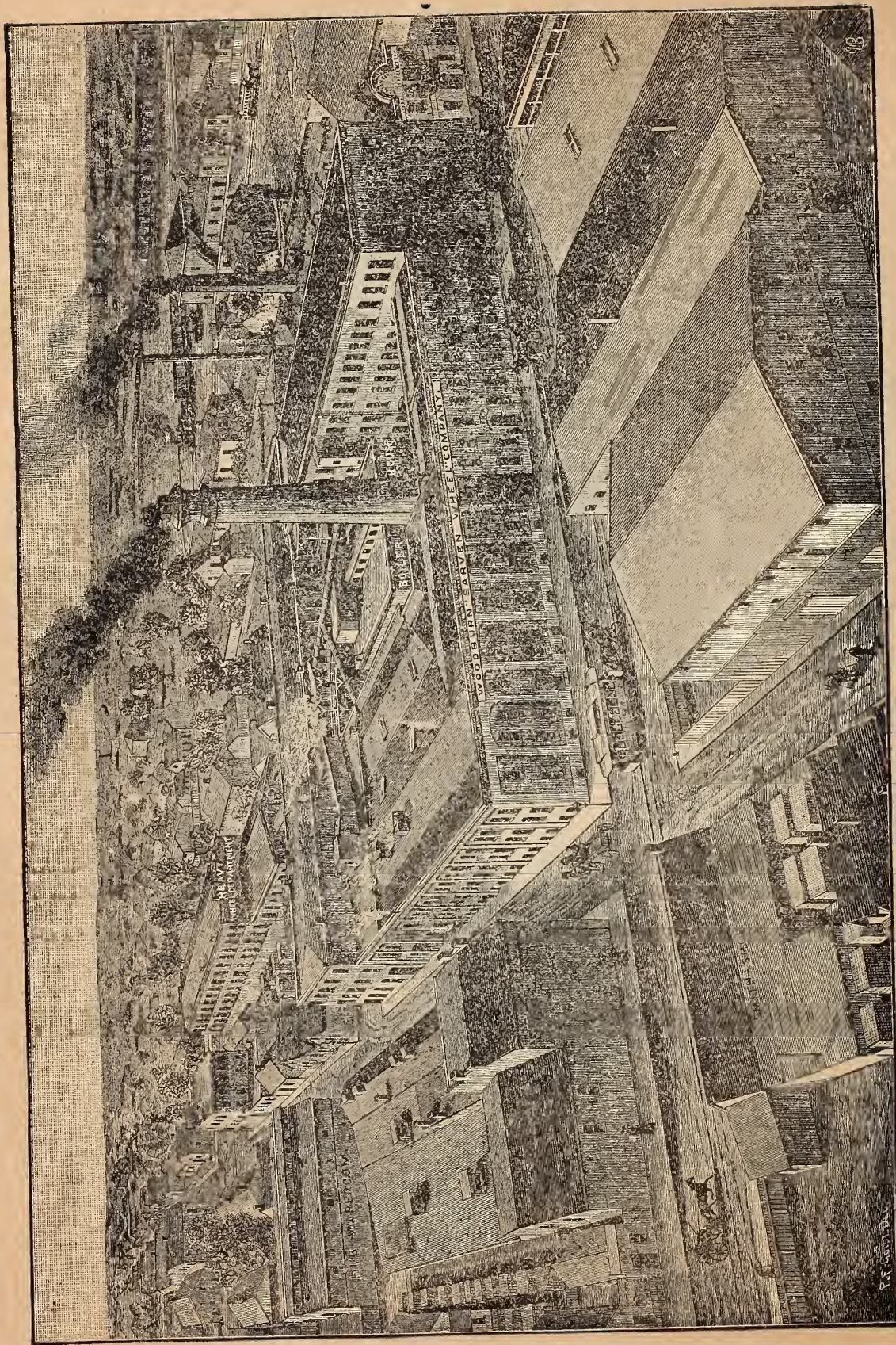
This is the only Chair ever invented that comes in the reach of a poor man, or is designed to suit all his wants. It is first a ROCKING CHAIR, and can be so adjusted as to suit a lady in any position in which she may choose to sit or lie. It is made of the best of hickory and walnut timber, and securely bolted together, so as to stand any kind of rough usage. There is no danger of children getting hurt by rocking over. It can be adjusted by raising or lowering the back at the top.

Second. It is a good, substantial chair for the office or sitting room, and can be adjusted by pulling the bottom forward to suit the position you wish to sit or lie in.

Third. It is a good Crib Cradle, by placing the back in the bottom and the bottom up in the end for the head of Cradle. The one chair can be placed in the four different positions, making three chairs and one cradle—and all for less money than any other one chair in the market.



JOHN PRESTON,
78 WEST MARKET ST., INDIANAPOLIS.



Woodburn "Sarven" Wheel Company, Indianapolis, Ind. See page 29.

INDIANAPOLIS.

The first settlement of Indianapolis was the first in Marion county. The following spring brought several families. The summer and fall added to these, and by the beginning of '21 there was quite a settlement. While the settlement consisted of not more than a half dozen families, it was selected as the site of the future State Capital.

The act of Congress of April 19th, 1816, gave to the State for the site of a Capital four sections of land anywhere the Legislature might choose on the unsold lands of the general government. On the 11th of January, 1820, the Legislature appointed ten commissioners to make the selection. Five accepted and served, and on the 7th of June, 1820, they agreed on what was called the "Fall Creek Site." The commissioners reported to the Legislature the following session, and on the 6th of January, 1821, the selection was confirmed and the new Capital called Indianapolis (the city of Indiana). The same act appointed Christopher Harrison, James Jones and Samuel P. Booker to "lay off" the town, and to meet on the site on the 1st of April to begin work. Only Mr. Harrison attended, but he proceeded alone with his work.

LAYING OFF THE TOWN.

Mr. Harrison appointed as surveyors Elijah P. Fordham and Alexander Ralston. Ralston did most of the work, and lived and died in the town about ten years later. Shortly before his death he made a survey of White River, on an order of the Legislature, to determine the feasibility of making it navigable by dams and locks. The Congressional donation of four square miles was not all put into the new city plat. Only one mile square in the center, with a half mile border of "out lots" was platted. This was laid off into blocks of 420 feet, ten each way, with intervening streets of 90 feet, the blocks divided by 30 feet alleys east and west, and 15 feet alleys north and south, making three lots in each quarter of a square and 12 in a full square, each a little over 66 feet front by 205 or 195 feet deep, according as it ran to a wide or narrow alley. In the center, dividing Market street, the Circle Park—then and for many years called the "Governor's Circle," because intended for the Governor's residence—was laid off with an 80 feet street around it, while from the farther corners of the four squares adjoining it four avenues were laid off. These were called Virginia, Kentucky, Indiana and Massachusetts. Except Market street, dividing the plat from east to west, and Meridian dividing it from north to south, and Washington, the principal street, 120 feet wide, all the streets were named after States. The donation outside of the square mile of the original city plat, was laid off in "out lots."

The city now includes all these and twice as much more. The first sale of lots was held on the 10th of October, 1821. The proceeds were reserved by the State to erect suitable public buildings, and in that same year \$8,000 was appropriated for a court house, as above related, on condition that the State Legislature should hold its annual session there. From the same resource was obtained the money to build a ferry-house at the foot of Washington street; a residence for the Governor in the Circle—never used except by the Supreme Judges and some of the State officers, and torn down in 1857—a State treasury office and residence where the present State building is; and a State-house begun in a 1832, finished in 1835, and torn down after over forty years of service in 1877.

For three years after the "laying out" of the town, it was a backwoods village of little pretention or prospect. There was no wagon road to older settlements, the river was not navigable except for Indian pirogues that brought an occasional load of corn from above, the region was infested with chills, and the capital still remained at Corydon, to which place it had been removed from Vincennes three years before the State's admission into the Union, in 1816. In November, 1824, however, the capital with all its appurtenances except the Legislature came in a four-horse wagon, traveling twelve miles a day. On the 15th of the following January the Legislature met, and then the country town began to feel the impulse of a new life. But it remained with no considerable change except the usual fluctuations of business and health, a mere county seat annually swelled a little by legislatures and hangers-on, till way was opened for business by the completion of the Madison railroad, October 1, 1847. During this period of twenty-three years, from the coming of the capital till the coming of the first railroad, the town gave no promise of its present condition. But in it must be traced the germs of most of the important elements of its development, and these and the leading features of its history will be briefly noticed.

PUBLIC SCHOOLS—HISTORY.

The history of the public schools need not be long to be complete. The city charter, in 1847, authorized the citizens to decide by popular vote whether they would levy a tax to support free schools. The majority for the schools was two to one. The population of the town was about 6,000. The tax was levied and paid, and lots bought and houses built for school purposes for six years before the system was well enough established and provided to be put in operation. During this time the trustee of each district managed it as best he could without any general

organization. In 1843 an organization was made. Henry P. Coburn, Calvin Fletcher and Henry F. West were made a board of trustees for all the schools. In March they elected ten teachers and required all pupils to pay \$2.25 a term. On the 25th of April the schools were made free for two months. As the means increased from the State school fund the State tax—levied under the provision of the new Constitution for “a general and uniform system of common schools wherein education should be free and equally open to all”—and the local tax assessed by popular will, the schools were more and more largely attended, the free terms made longer, and the system gradually advanced to the commanding position it holds now. This attainment, however, was grievously retarded by a decision of the Supreme Court, in 1858, which held the city school tax unconstitutional “for lack of uniformity”—a weak pretext for an interested and calamitous act. It was five years before the schools recovered from this blow. During a part of this time they were kept free for three months in the year by the State tax and fund, the pupils in most cases paying what was needed for longer terms. A succeeding Supreme Bench overruled the decision of 1858, and the Legislature made wise and liberal provisions under the better construction of the Constitution, and since then the schools have grown continuously and enormously. In the winter of 1867 “night schools” were opened. In 1869 two schools were founded for colored pupils in the Fourth and Sixth Ward houses. A “training school” was opened in 1866. In April, 1873, the School Board, by authority of law, opened the City Library in the High School building, corner of Pennsylvania and Michigan streets, subsequently removed it to the *Sentinel* building, and in 1880 to a building on the corner of Pennsylvania and Ohio streets, erected purposely for it. The use of it is free under a few very easy conditions regarding the safety of the books, and the number taken is enormous, being by the last report no less than 127,736 for the last year. The whole number in the library is 23,198 books and 3,252 pamphlets. The city is divided into eleven school districts; the commissioners are elected by the people in May for three years; a city tax of 20 cents is levied for school purposes and 2 cents for the library. The number of school houses is 29, including the High School; the number of teachers is 250, about 225 females to 25 males; the number of pupils enrolled, 14,691; the average belonging to school, 10,198; the average daily attendance, 9,495; annual expenses, including the library, \$231,407; the value of school property, including books and furniture of library, \$1,071,411.

INDIANAPOLIS ORPHAN ASYLUM

Is located in the northeastern part of the city, on College and Home avenue. It is an outgrowth of the Benevolent Society, and was designed by its founders to care for both widows and orphans. The lack of funds necessitated a change of purpose in regard to the extent of its charities,

and it was decided to take charge only of the most helpless objects, the orphans and half orphans.

In 1846 a Board of Managers was chosen, who were exclusively ladies, with Mrs. Marcia Willard as President. An Advisory Board of gentlemen was also appointed, among whom were James A. Blake and James M. Ray.

In 1850 a charter was obtained from the Legislature, and in 1854 they were enabled to purchase two lots, and received a lot by donation for the establishment of a Home on North Tennessee and First streets.

In 1855 the first building was erected, by donations received, at a cost of \$1,200. The old building and grounds on Tennessee street were too small to answer the increasing demand of our growing city. The managers, during the past year, purchased the present site at a cost of \$32,000, having had it leased for a term of years, it having proved to be a most desirable and remarkably healthy location.

The Public School Board furnishes a teacher for all children over six years of age. Those under six and over three years of age are provided with an excellent, tender, motherly instructor. The last annual written report showed that there were 103 children inmates of the asylum, all under 12 years but four; 37 of these are under 6 years. The children in this asylum are under the best of Christian influence, and they demonstrate continually the happiness found in mingling with those who love them. Good homes are sought and obtained for those children who are only kept temporarily. They are looked after, and many of them have grown up to be honorable and useful citizens. We are warranted in saying that the number of children temporarily provided for, through the charity of the Indianapolis Orphan Asylum, numbers 2,500.

The first year of its existence its receipts were \$113.16, and its expenditures \$98.30, the number cared for not being specified. Its charities were quite limited, being entirely dependent on private contributions. The outlook for a time was very discouraging, yet by the persistent efforts of its managers and increasing aid from the public, it lived through years of financial embarrassment and succeeded in performing its work of charity; in caring for comparatively few of the objects of its solicitude. During the years of the rebellion its efforts were greatly paralyzed by the demand for public funds. In 1869 the building was enlarged at a cost of \$300, all of which was received by donations. Since that period it has grown steadily in the line of usefulness.

The Orphan Asylum has as yet no endowment. The county has come to its assistance by a quarterly allowance for the board of each child, which has been an important item in helping its managers enlarge its charities, and it stands to-day among the most useful institutions for benevolence of our city.

MANUFACTURING ADVANTAGES—SITUATION.

Indianapolis stands in a vast plain, nowhere obstructed by hills or large rivers. The opportunity to spread is illim-



NEW STATE CAPITAL AT INDIANAPOLIS—BUILT OF INDIANA OOLITIC LIMESTONE.

itable. Consequently there can never be such high prices for good manufacturing sites as are constantly exacted in localities of restricted area. At any given line a buyer has only to go a few yards further out to get as cheap a lot as he could have got nearer a few years before. The difference is only in the distance to business centers, and this is of little consequence, especially to the workmen in industrial establishments, who want homes and lots of their own and have railroad conveyance in every direction. Cheap sites make a big advantage for the location of manufacturers.

TRANSPORTATION.

As already noticed, Indianapolis is provided with railroads almost as profusely as its limits will allow room for. Thirteen—including the old Madison road—are completed, and two approaching completion. Most of the towns in the State can be reached and a return made in a day. The effect is seen in the immense freight business of the city, as above specified.

FUEL.

The sources of cheap and constant motive power are close, abundant and unfailling. The State's coal field covers one-fifth of its whole area, nearly 7,000 square miles, and it is entered by five railroads terminating at Indianapolis, the I. D. & S., the I. B. & W., the I. & St. L., the I. & T. H., the I. & V. The different grades of coal suit all possible demands. One is a good steam coal, another good gas coal, another, the celebrated "block coal," is the best iron-working fuel on earth, being really a mineral charcoal, almost wholly free from sulphur and phosphorous and burning without fusing like wood or charcoal. *This feature is especially valuable in smelting iron, and with the absence of all deleterious elements like sulphur, makes it first of all metallic manufacturing fuel known. The competition of five railroads will keep it cheap, and its abundance is beyond exhaustion. At the present rate of coal production in England, the Indiana coal production will last 600 years longer than any establishment now in existence will want to use it.

TAXES.

The city debt of Indianapolis is about a million and a half and can not be increased. Its tax rate is limited to \$1.10 on \$100 and can not be exceeded. No loan can be made but for current expenses without special authority. The city tax last year was \$1.07 on \$100. The State and county taxes last year amounted to 63 cents on \$100. The total of all taxes, city, State and county, for roads, schools, State-house and all civil purposes, was \$1.70 on \$100. There is no city in the county with the same population and business interests with so low a rate of aggregate taxation.

RESOURCES.

No location in or out of the State is surrounded by a better agricultural country, better grain crops, larger pork supplies, or so large and handy resources of hard wood,

black walnut, oak, ash, beech, sugar or poplar. It is the greatest center of the black walnut trade.

MANUFACTURES—PRESENT—PORK PACKING.

This is the oldest of the city's industries in continuous existence, as well as the largest always. The first attempt was a failure, as is commonly the case with an enterprise modeled on too large a scale for the community. It was by James Bradley in 1833. He bought slaughtered hogs of farmers and cut and packed. Nothing further was attempted for about five years, when Mr. John H. Wright, of Richmond, began buying slaughtered hogs of farmers and shipping them off by flat boats during the spring floods. He was joined by his father, the late Jeremiah Mansur, and this sort of business was kept up until the completion of the Madison railroad in the fall of 1847. Most of the packing was done at Broad Ripple. From the time railroad transportation became possible the business increased rapidly. About the same time—1847-8—Benjamin I. Blythe and Edwin Hedderly built a house and began killing and packing. It would be interesting to know something of the extent of the business at this time, but no record was made except on the ledgers of the packing houses, but such information as is attainable makes it probable that the number of hogs killed by both parties during the season—and no other killing was known then—did not exceed 20,000. In 1873-4 it was 295,766; in 1880, 746,488.

Tracing for a moment the particulars of the development of this important business, it may be noticed that the first addition to the two houses of 1847-8 was made in 1852-3 by Macy & McTaggart in a house at the east end of the Vandalia railroad bridge. It is gone now, entirely. In 1855 Colonel Allen May built a house near the Crawfordsville road bridge, and packed there until he failed, during the panic of 1857; his house was burned in 1858. So his enterprise died and left no trace anywhere. The big addition to the pork industry was made in 1864 by Kingan, and to him the city is indebted for the introduction of the only important improvement recently made in it. That is the "summer packing." The value of this change is almost incalculable, if all the consequences are considered. It has vastly enlarged the aggregate of business; it has employed hundreds of men who would otherwise have been idle; it has given the farmer a constant instead of a periodical market for his hogs, and it has kept up a movement of money and business, when without it there must have been more or less sluggishness and possible stricture of business. In the summer of 1880 Kingan killed 277,270 hogs. The burning of Ferguson's house in February, 1881, reduced the business of the past year, and the shortage of crops helped the mischief so that the aggregate of 1881 was a little less than a half a million. Fluctuations like this are inevitable in all industries, and in pork more than in most others. In 1873 the number of hogs killed was 295,766, value \$7,614,000. In 1878 it was 766,000;

in 1879, 667,000; in 1880, 746,500; in 1881, 472,494, the falling off being the effect of short crops and bad times generally for agricultural affairs. The general result has been an advance, as the number in 1877 was only 420,000. This year the promise of good crops, if realized, will fully restore the deficiency. The total value of hog products in 1880 was \$10,516,000, and the number of hands employed 1,235.

IRON MANUFACTURE.

The first attempt at the manufacture of iron here was made about three years earlier than the first attempt at pork packing. It resulted in much the same way. R. A. McPherson & Co. put up the building for an iron foundry in 1832, and kept up a spasmodic business till 1835 and quit. In that year Robert Underhill established a foundry, and here for twenty years he maintained the first paying iron manufactory in the city. It was a small business and did only such casting as was required by country customers, millers and farmers. The amount of it, of course, is purely conjectural, but no reasonable conjecture can make it more than a few thousands of dollars a year.

The "boom" in this, as in several other industries, as already noticed, came with the completion of the first railway in 1847. At that time Watson & Voorhees established the Eagle Machine Works, in which they were succeeded in 1859 by Hasselman & Vinton. Two destructive fires in close succession in 1852-3 obstructed their progress, but in spite of their losses they added the manufacture of threshing machines and agricultural implements to their business in time to make a most creditable exhibition in 1853 at the first State Fair. Not long after this Mr. Underhill abandoned his foundry and established a machine shop on the northern bank of the creek, at the crossing of the same street, now enlarged into the Sinker & Davis establishment. In 1850 Mr. Root started his stove foundry on the same street, near South street, and Mr. Haugh began making iron railing. Later came the Phoenix Works, the Novelty Works, the Quaker City Works, the Atlas Works, Hetherington & Berner's, Dean Bros., the File Factory, Atkins' Sheffield Saw Works, and in 1858 the greatest addition of all, the Rolling Mill, at first, and for some years, a failure, but soon redeemed and made the most important of the city's industries.

No complete statistics of this important industry prior to 1873 are attainable, but for that year the Secretary of the Board of Trade makes a full and accurate report, which shows that the foundries and machine shops turned out for 1872 \$1,375,000 worth of work, and for 1873 \$1,421,000 worth, used \$878,000 of capital and employed 633 hands. The rolling mill turned out \$1,400,000 worth of rails in 1872, and \$1,580,000 in 1873, employed \$900,000 capital and 475 hands. The Malleable Iron Works turned out \$175,000 worth of work in 1873, with a capital of \$115,000 and the employment of 70 hands. File works

turned out \$47,000 worth of product with \$21,000 capital and 46 hands. Edge tools, \$15,000 of product, \$5,000 capital, 9 hands. The aggregate of all forms of industry dealing with iron or steel, except agricultural implements, was, in 1873, in product \$3,238,000, capital \$1,919,000, hands 1,233. In 1880 the aggregate product of foundries, machine shops, rolling mills and saw works was by the census—and we have later report—\$3,869,000, and the number of hands employed 2,241, an increase of 20 per cent. in product and nearly 100 per cent. in the number of hands employed. These returns are but vague indications. They do not present the same class of details with the same particularity, and consequently do not allow comparisons except at one or two points. The product of the Rolling Mill, for instance, was larger, according to the estimates of the Secretary, in 1880 and 1881—24,000 tons—than in any years previously, but the value of the product has declined since 1873, and the total value returned in 1881 is less than in 1873.

The new steel mill in operation, with a force of 400 to 500 hands, can turn out about \$3,000,000 of steel rails annually.

A large company has purchased the suspended iron foundry at Haughsville, west of the river, and have opened with a force of several hundred hands, making one of the largest establishments in the country for the manufacture of malleables.

LUMBER AND MANUFACTURES OF WOOD.

Although the second largest in value of annual products, and altogether the largest in the force of hands it employs, the manufacture of wood in all forms, with the trade in lumber, is the least satisfactorily exhibited in the reports attainable of all the industries of the city. It is impossible to obtain anything earlier than the Board of Trade report for 1873. However, the trade in lumber, hard and soft, as well as the manufacture of wood on an extended scale, are almost wholly the growth of the last twenty years. It would be a satisfaction to be able to trace the growth, by authentic details, of even three or four of the leading wooden industries, but there are no materials for comparison earlier than '73 that can be made available.

As far as possible an exhibit of some of the leading manufacturers, and of the lumber trade, will be made within the period beginning with that year. The value of the lumber sold in the city in '73 was \$4,942,000. In 1881 the receipts of lumber, exclusive of shingles, laths and staves—all three important items, but with no detail of amount or value in any report—were 152,000 M's, the value of which at the average of prices for that year, taking "common stuff" with the best, would be about \$6,000,000. How much shingles, staves and laths would add to this can not be conjectured even by lumber dealers, with accuracy enough to allow it to enter into a comparison of the annual amount of business. Something more definite and satisfactory is found in the reports of cooperage and stave products,

In 1873 the total value of products in the department of wood work was \$181,000; in 1880 it was \$1,106,861. It employed 127 hands in 1873, and 690 in 1881. The furniture product of 1873 was \$735,000, with 356 hands. In 1881 it was \$1,074,600, with 1,316 hands. The aggregate products of all the industries of the city, employing wood or lumber wholly or mainly in their operations, was in 1873 \$3,013,200, and the force of hands 2,570. In 1880 the aggregate product of the same class of industries, as far as it can be extracted from the census report, was \$5,867,000, and the number of hands 4,914.

Indianapolis is, and has from the first, been the center of the hard wood lumber and black walnut trade. Of its extent and progress some idea is afforded by a comparison of the reports of '73 and '79, '80 and '81, though they are not in a shape to allow a ready use for such purposes. In 1873 the total sales of lumber were 119,800,000 feet, "of which," says the Board of Trade, "about one-half was black walnut," that is about 60,000,000 feet. In 1872 the total value of sales of all forms of lumber was \$4,016,931, against \$4,942,000 in 1873, a very large growth in one year. In 1879 the total receipts of lumber were 104,537 M's, while 12,180,000 feet of logs were received by rail and 4,000,000 feet by wagon, "about half of which was walnut," that is about 8,000,000 feet of walnut logs. The proportion of walnut in the lumber received is not stated, but if it was as large as the proportion in 1873 the walnut trade in 1879 would be about 60,000,000 feet, just what it was in 1873. The failure of advance in this trade is easily accounted for. The black walnut does not grow to a merchantable magnitude in a year or two; it takes more nearly a century. So as trees disappear the trade is bound to decline. There is nothing to replace the loss. In 1880 the receipt of lumber was 111,231,000 feet, and 8,520,000 feet of logs were received by rail, and 4,000,000 feet by wagon. Of these latter receipts only one-eighth was walnut and one-half oak, showing a rapid waste of the walnut growth of the State. In 1881 the receipts of lumber were 152,902,000 feet, but no receipts of logs are reported, and no estimate is made of the proportion of walnut. There can be little doubt of its rapid decline, however, and its extinction, or something very near it, can not be far off.

GRAIN AND ITS PRODUCTS.

In this important branch of the city's commerce and industry, the facts upon which to construct an exhibit of the progress from time to time are as impossible to come by, beyond the earlier part of the last decade, as in other branches. Milling has, of course, been a leading industry ever since the city was laid out. It usually is in agricultural communities. But it does not always become a commercial enterprise, even where it is an indispensable part of a community's industry. Here it was not until the opening of railway transportation made it so.

The total value of grain sold in this city in 1873 was

over \$3,000,000. The flouring mills produced a total value of \$1,926,000, with \$635,000 capital and 96 hands. In 1879 the sales of wheat amounted to 7,707,750 bushels, worth, at the average prices of that year, over \$8,000,000. The sales of corn were 12,647,000, at the average price of that year worth \$5,000,000. The product of flour that year was 210,822 barrels. In 1880 the total of the grain sales by the Board of Trade was 17,067,278 bushels, valued at \$9,791,124. Adding sales outside the Board, estimated at \$2,500,000, the total for 1880 was \$12,191,124. The total production of flour was 250,000 barrels, a gain of nearly 50,000 barrels over the year before. In 1881 there was a decrease in the receipts of nearly 4,089,503 bushels, the crop all over the country being short. That of this State fell off 16,500,000 bushels. The flour product fell off 11,129 barrels from the same cause. All grain products were reduced with the reduction of the crop.

The total milling capacity of the city is now about 2,000 barrels a day. In addition to the manufacture of wheat flour, a large business is done in the manufacture of corn flour, hominy and grist. There are three mills in the city applied exclusively to this class of milling. One of them has been erected since the spring. Each of these has a capacity for 500 to 2,000 bushels of corn a day. The product in 1881 was 12,000 barrels of meal and corn flour, 22,000 barrels hominy and grist, and 4,500,000 pounds of feed.

SUMMARY.

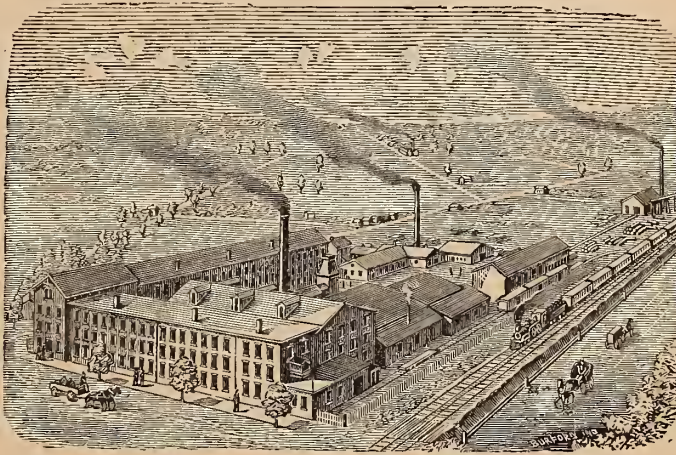
The total amount of manufactures produced here in 1873 was \$28,012,740, with a capital of \$11,076,000, and the employment of 8,175 hands. In 1880 the aggregate manufactured product of the city was \$31,525,748, the number of hands 14,482, and of establishments 801. The last report of the Secretary of the Board of Trade reports, but not in detail, that there has been a large advance on the product of 1880 during the year 1881.

The effect of the exhibit thus made must be to enforce the opinion with which it opened, that Indianapolis is as admirably adapted by situation, facilities of transportation, supply of fuel, health, education, cheapness of building sites, and every other consideration that goes to fix the decision of sensible men in investing capital in manufactures, as any city of its size, or any size, in the whole country. The advantages of the Belt Road and Stock Yards are merely alluded to, as they only incidentally concern the subject of manufactories. But they are important elements of growth and prosperity, and therefore not to be overlooked. The same may be said of the State Fair, which is annually held in the northern suburb of the city, with a vast exposition building and an amply furnished ground for all kinds of agricultural or mechanical exhibitions, which are freely at the city's service, and very freely and and frequently used.

Within the past two years fourteen new manufactories have been started or enlarged, which will employ 1,200 hands, and produce probably \$4,000,000 of value of work.

WOODBURN "SARVEN WHEEL" COMPANY, *Manufacturers of Vehicle Wheels, Bybee & Pratt, Proprietors.* The extensive establishment which furnishes the subject-matter for the present sketch, and which is to-day the most extensive of its kind in the world, was founded in a modest way and upon a comparatively small scale more than a quarter of a century ago for the manufacture of wagon material, and a few years later that special variety of vehicle known to the trade as the "Sarven patent wheel." During this period there have been numerous changes in the personnel of its management and proprietorship, until in 1870 it was incorporated as the Woodburn Sarven Wheel Company under the laws of the State of Indiana. Several years ago this company became the property of Mr. Addison Bybee and Mr. J. F. Pratt, these gentlemen having for several years previously held a large interest in the works, and under their efficient and energetic management the scope of its operations has been considerably enlarged. The plant of the present company comprises about seven acres, upon which are erected commodious and substantial buildings for manufacturing purposes, equipped with special devices of wood-working machinery, propelled by a mammoth steam engine of 500-horse power. Upon these premises are also immense warehouses, sheds, dry kilns, etc., and spacious yards for the storage of lumber and stock. An average force, of over 500 skilled and experienced workmen is employed, necessitating an annual disbursement for the item of labor alone of more than \$200,000. The products of these works comprise every variety of vehicle wheels, Sarven patent band hub, Warner and plain wood hub, from those adapted to the lightest sulky to those intended for the most ponderous drays capable of sustaining a weight of six to eight ton. The Sarven wheel is the only wheel manufactured having a mortised wood hub and turned spokes, supported by flanges which are connected by rivets, and those produced by this company are made from the very best material and in the most thorough and substantial manner, and their construction may be briefly described as follows: The hubs and spokes are mortised and tenoned like the common wheel, but in addition to this the spokes are mitred so as to form a solid arch outside of the hub. The face of the spoke is dressed with the most perfect accuracy by machinery; then two flanges made of choice malleable iron are fitted to the hubs and spokes and riveted through.

This sustains and supports the arch formed by the spokes, and yet leaves the same elasticity of wood in the hub and spokes that is in the common wheel. The standard wheels manufactured by this company are not excelled by any in the market, the best proof of this assertion being the largely increased demand for them from all sections of the United States and Canada and the rapid growth of the business transacted by the company. This is also attested by the fact that during 1883 they manufactured and sold more than 80,000 sets of vehicle wheels. In order to meet the increased demands upon them they built and equipped, in November last, a complete wheel factory for the manufacture of heavy wheels, thus making a separate and special department for this kind of work.



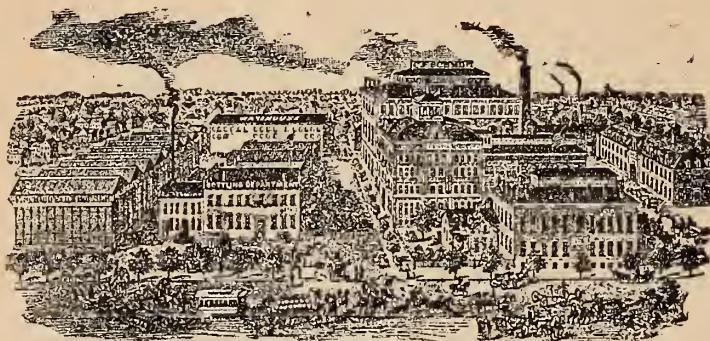
INDIANAPOLIS CABINET WORKS.

INDIANAPOLIS CABINET COMPANY, *Cabinet Work and Veneers, Malott Avenue.* Prominent among the industrial establishments pursuing a most important branch of productive industry, bearing upon the general commercial prosperity and manufacturing thrift of the community, the Indianapolis Cabinet Company claims conspicuous recognition in these pages as being the most extensive establishment of its class west of the Allegheny Mountains, and one of the largest in the United States. The present company, which was organized in 1880 with a capital stock of \$150,000, is the outgrowth of an enterprise inaugurated in this city in 1862, as a branch of the Wheeler & Wilson Sewing Machine Company, of Bridgeport, Conn., for the manufacture of tables, cabinets, etc., for their machines. The officers of the company are John Roberts, president, and F. A. Coffin, secretary and treasurer. These gentlemen are also proprietors and sole stockholders of extensive veneering works, conducted on the same premises, with a capital invested of \$110,000. The plant of these extensive works occupies a ground space of about six acres at the head of Malott street, with switches from the Bee Line Railroad running directly into the grounds, and one into the main building itself. One of these switches has a capacity for seventy-five cars at one time, their facilities for receiving supplies of lumber direct from the mills and producing districts of this section, as well as for the shipment of finished products being unsurpassed. There are erected on the grounds sixteen substantial and

commodious buildings for manufacturing purposes. The main structure, which is a three-story brick building, has a frontage on Malott street of 322 feet, while the numerous other buildings are spacious, conveniently arranged and thoroughly equipped, with special machinery for their particular line of work. An average stock of lumber, principally of native black walnut and other beautiful hard and soft woods indigenous to

this section, is constantly carried on hand in their extensive yards and dry-houses, valued at not less than \$100,000, while the agents of this company, in various sections of the Union are constantly purchasing supplies to meet the constant demand. The average number of skilled workmen employed in the various department

ments of these extensive works is about three hundred, with a weekly pay-roll of nearly \$2,000. The motive power for the machinery is supplied by one "Brown" engine of 100-horse power, manufactured at Fitchburg, Mass., and one 60-horse power engine, furnished by Messrs. Sinker, Davis & Co., of this city, and the works are now turning out in the cabinet department 1,000 tables and 300 covers and drawer pieces per day, while in the veneering department the two mills are turning out about 9,000 feet of choice selected lumber daily, all of which is consumed as fast as produced, the machinery employed in this department being of the most perfect and approved style. The demand for the products of these works in the cabinet line is principally confined to the Eastern States, manufacturing largely for the Singer Manufacturing Company, the Howe Sewing Machine Company, and numerous other large Eastern manufacturing firms. The annual transactions have hitherto reached at least \$275,000, and from present indications the sales of 1883 will exceed that amount by nearly 100 per cent.



SCHMIDT'S BREWERY.

capacity of the brew was about 1,000 barrels per year, and from this small beginning grew what is to-day an immense institution—the largest brewing establishment in the State.

Uniform success marked the growth of this institution, and in 1867 the first addition was built. The next improvement was made in 1870 by the building of a large cellar.

In 1872 Mr. Schmidt died, and the charge of the large establishment, the fruit of his energy and enterprise, was practically in the hands of the administrator of his estate, until 1881, when the care and management descended to his sons John W. and Edward Schmidt.

The spirit of enterprise and vigor that marked the business career of the elder

Schmidt seems to have animated the sons, for the year 1881 and subsequent periods, especially the present year, bear evidence of improvements on the grandest scale. New machinery has displaced the old, and and colossal buildings of modern architecture have taken the place of those by which their erection was made possible. It is pre-eminently the finest and largest in the State, and one of the best in the Union. The buildings cover an area of about ten acres, and consist of two brew houses, a large beer bottling establishment (in which are the offices of the brewery); two large storage houses (with a capacity of 40,000 barrels), large ice houses and commodious stables. The brewery gives employment to nearly one hundred operatives, with a yearly product of 100,000 barrels of beer, which is rapidly sold throughout Indiana and Illinois. The fame of their Extra Brew Wiener beer, and Export lager beer (bottled goods), has extended to many parts of the country. The business is rapidly increasing, and merits success.

At the last election, November 4, 1884, Mr. Edward Schmidt was elected as Representative to the Legislature, which is in itself a fitting testimonial of the regard these young men obtain in the community in which they reside.

C. F. SCHMIDT'S BREWERY was established in 1859. The firm at that time was Schmidt & Jaeger. After a period of two years Mr. Jaeger withdrew, leaving the management of the brewery to Mr. C. F. Schmidt. The

EVANSVILLE.

EVANSVILLE PUBLIC SCHOOLS—EARLY HISTORY.—The city of Evansville takes its name from General Robert M. Evans, who, in the year 1816, entered a large part of the land where the city is located.

Evansville, a port of entry of Indiana, the capital of Vanderburgh county, is beautifully situated on a high bank of the Ohio river, about 190 miles below Louisville and 190 miles above Cairo. It is the second city in the State, and is noted for its beauty, wealth, enterprise and educational facilities.

In 1818 it contained 125 persons, and was made the capital of Vanderburgh county. The first school of the village was taught by Mr. Chute. This was opened in a part of his own residence, as no school-house had yet been erected. In 1824 this gentleman took charge of a school opened in a small school-house built by the contributions of citizens, and served for many years as principal. Rev. Mr. Wood and D. C. Banks are named among those who devoted themselves assiduously to the promotion of education in the early history of the city.

In 1830 the population of Evansville numbered 500, and paid a school tax of only \$36. In 1850 the population of the city numbered about 3,600. Up to this time no steps had been taken to organize a system of public schools. The schools were conducted in small houses in different parts of the city. Though the pay was but \$30 per month in 1850, yet faithful teachers were not wanting for the work of laying well and deep the foundations upon which the present system was built. Among this noble band may be mentioned Calvin Fletcher, Miss Fisher, Miss Clark, Thos. McAvoy, the Misses York, Miss Worth, Miss Burr, Miss Abbott and Prof. J. W. Knight.

The present system was established in 1853, when the city had a population of 7,790, and an enumeration of 1,716 children. The first Board of Trustees was composed of H. Q. Wheeler, William Hughes and Christian Decker. When this Board asked the City Council for a levy of 25 cents on the hundred dollars of taxable property the petition was referred to the people, who voted in its favor. To H. Q. Wheeler, President of the Board, and acting Superintendent, is due the credit of organizing the schools. He was continued in office from 1853 to 1865.

SCHOOL BUILDINGS.—No city in the State can boast of more elegant school buildings than can be found in Evansville. Much wisdom has been displayed by the successive City Councils in the selection of men of broad and liberal views as members of the school boards. The provisions, in the way of large and well-arranged buildings, proves that

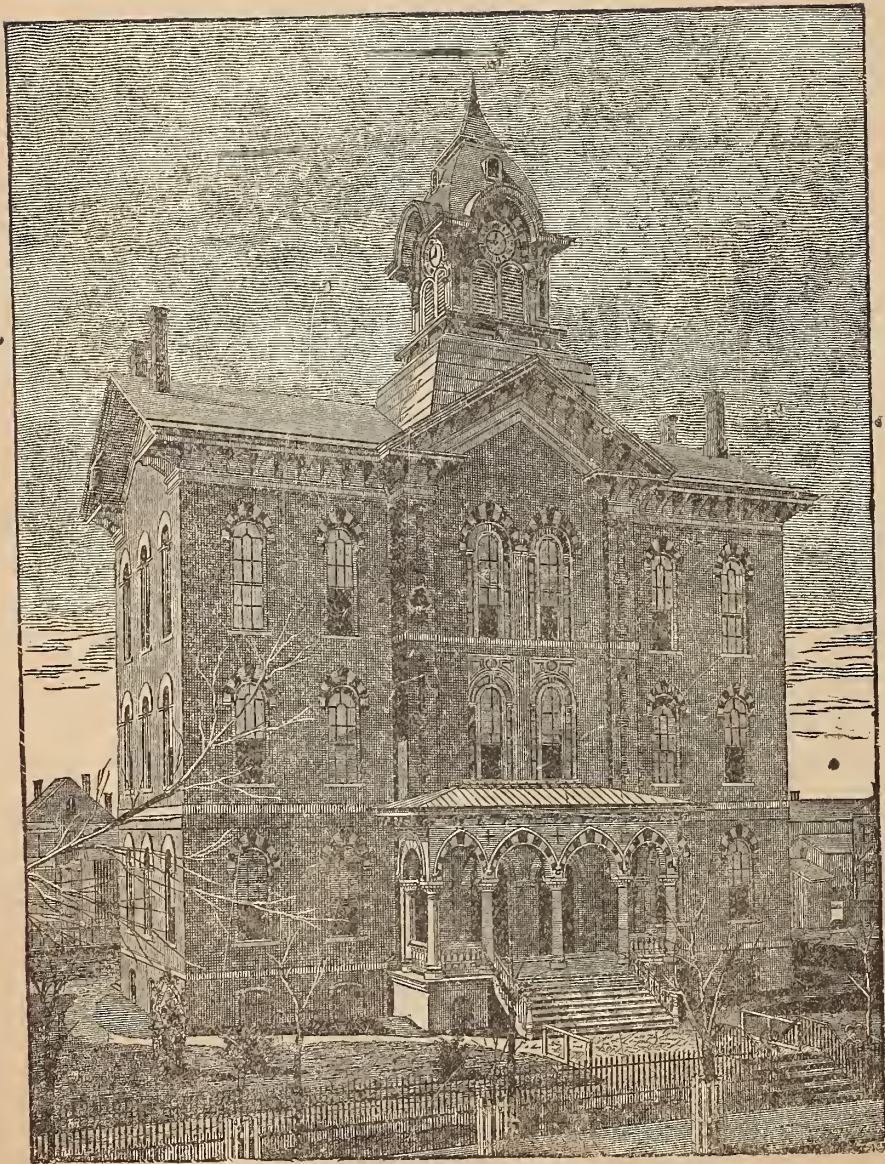
they had faith in the future prosperity of Evansville. While less far-seeing citizens often criticized the erection of such large buildings, and predicted that many of the school-rooms would never be used, yet the fact that in six buildings of the city, we are compelled to resort to half-day schools for first year children, (notwithstanding additional room has been provided each year), proves that the Trustees were right. In fact their expectations have been more than realized. The building of a twelve school rooms house, which will be ready for school in a few weeks, will not entirely relieve the pressure for school room. The Board has already arranged for the erection of another building, which will be ready for use next year.

CANAL STREET SCHOOL HOUSES.—Canal Street School Building, on Canal, between Third and Fourth, was erected in 1855, by the direction of the School Board, consisting of H. Q. Wheeler, William Hughes and Christian Decker. The original cost of the building was \$15,000. This building having served its time was taken down during the past summer, and on its site has been erected, during the summer a building of fifteen rooms. This building, which will be completed in a few weeks, was erected by the present Board of Trustees, R. F. Schor, Dr. Edward Linthecum and James T. Walker. The cost of this building will be about \$32,000. In many respects it will be the best building in the city. The heating, lighting and ventilating are of the most modern and approved kind. Two other four-room buildings stand on the same lots, one fronting on Third street, the other fronting on Fourth street. The aggregate cost of these buildings was about \$24,000.

CARPENTER STREET BUILDING.—This building was erected in the years 1859 and 1860, at a cost of about \$15,000. In 1878 this building was remodeled and a new building of six rooms was placed in front of the old building, forming one building with a capacity for 900 pupils. Eighteen teachers are at present employed in this building.

NINTH STREET BUILDING.—This building was erected in 1867. It is three stories in height, and contains twelve school-rooms. The original cost, exclusive of ground, was \$28,915. Twelve teachers are employed in this building at present.

HIGH SCHOOL BUILDING.—The High School building, between Vine and Division, was erected on Seventh street, in the years 1867 and 1868, at a cost of \$75,000. It is three stories high and contains twelve school-rooms. Some idea of the increase in the number of pupils in the High School may be formed from the following: In 1875 the



EVANSVILLE HIGH SCHOOL BUILDING.

enrollment was 109, of which nine graduated; in 1884 the enrollment was 370, of which forty graduated.

FULTON AVENUE BUILDING.—This building is situated on a beautiful square on Fulton avenue, between Michigan and Virginia streets. It was erected in 1870 and 1871, and cost, exclusive of grounds, \$37,750. The rapid increase of population in this part of the city made it necessary to build an addition of eight rooms. This addition cost about \$13,000. The entire building now contains seventeen rooms, and will accommodate 800 pupils. Seventeen teachers are employed in this building at present.

BAKER AVENUE BUILDING.—This building is on the corner of Baker avenue and Michigan street. It was erected in 1871 and 1872. It is a neat two story building, and contains six school-rooms. It has a seating capacity for 300 pupils. On account of the rapid improvement of this part of the city many of the children of this district have been sent to other schools. Two half-day schools have been maintained in this building for the past two years. The Board has already taken steps for building an addition to this house.

COLUMBIA STREET AND CAMPBELL STREET BUILDINGS.—These buildings, on opposite sides of the city, were erected in 1874 and 1875. Each building is three stories high, and contains twelve rooms with a capacity for 600 pupils. All the rooms in each building are occupied at present. The cost of each building, exclusive of grounds, was \$38,000.

CENTENNIAL BUILDING.—This building is situated on the west side of Twelfth avenue, between Indiana and Illinois streets, Independence. It was erected in the years 1875 and 1876, hence the name. The building is three stories high and contains twelve school-rooms. In 1881 but six rooms were occupied; now, 1884, eleven rooms.

GOVERNOR STREET (COLORED) BUILDING.—Governor street building is situated on the corner of Governor and Mulberry streets. The building was erected in 1873 and 1874. The building contained four rooms. In 1876 the crowded condition of the schools made it necessary to prepare a room in the basement. Again in 1881 the rapid increase of pupils made it necessary to provide additional room. In order to do this the Board resolved to remodel the house and build an addition to it. By this improvement eight school-rooms were added. The building is two stories high and contains twelve school-rooms. At present, on account of the large attendance, the first year grade is a half-day school (one-half of the children attending in the forenoon and one-half in the afternoon.)

INDEPENDENCE (COLORED) BUILDING.—This building is on the corner of Iowa street and Wabash avenue. It contains four school-rooms. Three teachers are employed at present. The enrollment is 132 pupils.

CLARK STREET (COLORED) BUILDING.—This is the only school building not owned by the city. It is on Clark

street, and was leased by the School Board in 1869, since which it has been used as a school-house. Two teachers are employed in the school. The enrollment is 113 pupils.

SCHOOL TRUSTEES.—The law providing for the appointment of School Trustees has undergone several changes since the organization of the schools in 1853. In 1853 the law required that three Trustees should be appointed, either by vote of the people or by the Common Council, for a term of three years, one of whom was elected President of the Board, and by authority of the Council they appointed a clerk. In 1861 the law was changed, requiring but one Trustee, who was to be elected by the people, and so remained until 1865, when the law was again changed, requiring that Council elect three Trustees biennially. In 1867 the law was again changed, requiring the City Council to elect three Trustees—one for three years, one for two years and one for one year, and that afterwards that one Trustee should be appointed each year for a term of three years; that they shall organize by electing one of their number President, one Treasurer and one Secretary. The following are the names of the Trustees, Clerks and Superintendents during the different periods:

FIRST PERIOD—Trustees, Superintendent and Clerk, from 1853 to 1861:

1853-1857—President, H. Q. Wheeler; other members, William Hughes, Christian Decker; clerk, J. W. Knight, superintendent, H. Q. Wheeler.

1857-1860—President, H. Q. Wheeler; other members, William Hughes, Philip Hornbrook; superintendents, J. W. Knight (1858-9), H. Q. Wheeler.

1860-1861—President, H. Q. Wheeler; other members, Philip Hornbrook, Carl Schmidt; superintendent, H. Q. Wheeler.

SECOND PERIOD—From 1861 to 1865:

H. Q. Wheeler, sole trustee; Hon. Wm. Baker, superintendent.

THIRD PERIOD—From 1865 to 1867: (Elected biennially.)

1865-1866—Emil Bishof, president; Asa Iglehart, treasurer; Isaac Casselberry, secretary; E. J. Rice, superintendent.

1866-1867—Emil Bishof, president; Asa Iglehart, treasurer; Isaac Casselberry, secretary; E. J. Rice, superintendent.

FOURTH PERIOD—From 1867 to 1874: (Elected by Council for three years.)

1867-1868—Isidor Esslinger, president; Asa Iglehart, treasurer; John W. Foster, secretary; Alex. M. Gow, superintendent.

1868-1869—Isidor Esslinger, president; Asa Iglehart, treasurer; John W. Foster, secretary. Alex. M. Gow, superintendent.

1869-1870—Chas. Lawenstein, president; Wm. Parrett, treasurer; Dr. H. W. Cloud, secretary; Alex. M. Gow, superintendent.

1870-1871—Chas. Lawenstein, president; Wm. Parrett, treasurer; Dr. H. W. Cloud, secretary; Alex. M. Gow, superintendent.

1871-1872—Chas. Lawenstein, president; Wm. Parrett, treasurer; Dr. H. W. Cloud, secretary; Alex. M. Gow, superintendent.

1872-1873—Chas. Lawenstein, president; Wm. F. Parrett, H. W. Cloud, treasurers; John H. Polsdorfer, secretary; Alex. M. Gow, superintendent.

1873-1874—Dr. H. W. Cloud, president; S. R. Hornbrook, treasurer; John H. Polsdorfer, secretary; Alex. M. Gow, superintendent.

1874-1875—Luke Wood, President; H. W. Cloud, treasurer; John H. Polsdorfer, secretary; Alex. M. Gow, superintendent.

1875-1876—Luke Wood, president; T. B. Bridwell, treasurer; S. J. Lawenstein, secretary; J. M. Bloss, superintendent.

1876-1877—R. D. Richardson, president; T. C. Bridwell, treasurer; Adolph Pfafflin, secretary; J. M. Bloss, superintendent.

1877-1878—T. C. Bridwell, president; Adolph Pfafflin, treasurer; J. W. Wartmann, secretary, J. M. Bloss, superintendent.

1878-1879—Adolph Pfafflin, president; J. W. Wartmann, treasurer; T. C. Bridwell, secretary; J. M. Bloss, superintendent.

1879-1880—J. W. Wartmann, president; T. C. Bridwell, L. M. Baird, treasurers; Adolph Pfafflin, John W. Roelker, secretaries; J. M. Bloss, superintendent.

1880-1881—John W. Roelker, president; J. W. Wartmann, treasurer; Alex. Gilchrist, secretary; John Cooper, superintendent.

1881-1882—J. W. Wartmann, president; Alex. Gilchrist, treasurer; R. F. Schor, secretary; John Cooper, superintendent.

1882-1883—Alex. Gilchrist, president; R. F. Schor, treasurer; Dr. Edward Linthicum, secretary; John Cooper, superintendent.

1883-1884—R. F. Schor, president; Dr. Edward Linthicum, treasurer; James T. Walker, secretary; John Cooper, superintendent.

GROWTH OF THE SCHOOLS.—The following schedule exhibits the enumeration of children between the ages of six any twenty-one, who were entitled to school privileges; the number enrolled in the public schools (so far as any record has been preserved), and also the number of teachers employed:

Years.	Enumeration.	Enrollment.	No. Teachers.
1862	4,271	. . .	33
1863	4,932	. . .	35
1865	4,475	2,216	36
1866	5,895	. . .	39
1867	7,207	. . .	51
1868	7,584	. . .	53
1869	8,625	2,808	58

1870	9,561	3,194	67
1871	10,287	. . .	76
1872	10,999	4,136	. .
1878	. . .	4,728	102
1879	12,871	4,867	118
1880	12,784	4,876	118
1881	13,124	5,704	125
1882	13,811	5,286	133
1883	15,121	5,556	137
1884	16,676	5,582	139

TELEPHONES.—The school buildings of the city are connected with the Superintendent's office by telephone. The connection with the City Exchange by the Telephone Company has not only increased the privileges of their patrons but has greatly increased the advantages of the telephone to the schools. By the use of the telephone many of the difficulties of superintending the schools have been removed, and the time of the superintendent thus saved and devoted to more important work. Personal interviews with both principals and teachers in reference to the work of the schools, explanations of reports, directions, advice, answers to questions, etc., can be made without loss of time. Business which cost the Superintendent hours of time and travel from one building to another can be adjusted in a few minutes. This would appear, at first thought, to lessen the work of the Superintendent; but on the contrary it has increased his work and responsibility. Advice is now asked a hundred times more frequently than before, because the Superintendent's office is now practically in every building, connected by telephone. The result is that more work is done, less time lost in waiting for advice by notes, and no time lost by pupils in carrying notes. Thus the telephone has proved to be of great value in the work of managing the schools, and has proved itself worth many times its cost.

GENERAL FEATURES.

Evansville is the second city in commerce, manufacture and population in the State, is the judicial seat of Vanderburg county, located on the Ohio river, upon an elevated site, above the highest waters known in the Ohio. It has grown steadily from infancy, in 1839, to the present population of about of 40,000. While Evansville has not made the rapid strides of some of our Western cities, the growth has been gradual and substantial. It is surrounded by a rich agricultural district and situated in the midst of a coal field wherein a number of mines are operated that furnish cheaper fuel for manufacturing and other purposes than any other city can boast of. Evansville can also lay claim to being the largest hard-wood lumber market in the State. The city is rapidly on the increase in every respect, and is destined to become the largest manufacturing district in Indiana.

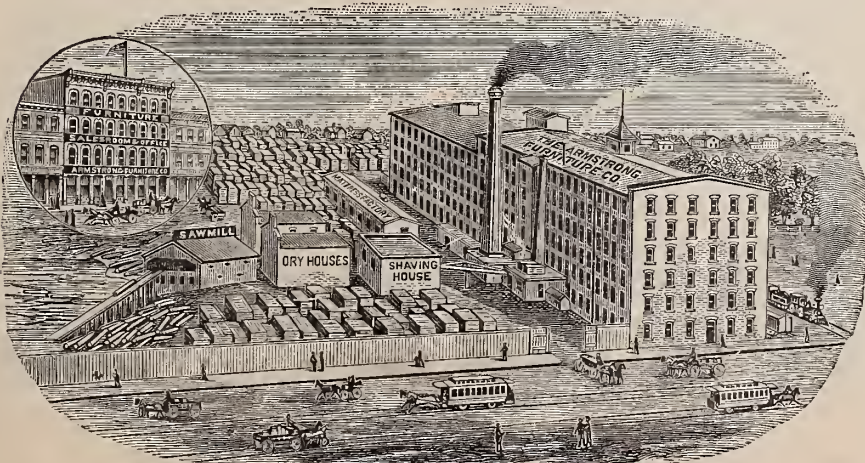
Evansville is a handsome, well-built city. Her pride is the large number of elegant churches and substantial educational institutions. Of the latter a comprehensive review is given in another part of this sketch. The fire depart-



Novelty Machine Works, Evansville, Ind.



Kratz Bros.' Foundry and Machine Shop, Evansville, Ind.



Armstrong Furniture Company, Evansville, Ind.

ment is well equipped and supplied with telegraph fire alarm. The city is lighted with gas and electric light, has street railway, good water works, three public libraries, St. Mary's Hospital, fine opera house, board of trade, stock yards, custom house, telephone exchange, belt railway—in fact, every convenience found in much larger cities. There are, in all, seven banking institutions—five national, one private and one savings—with a capital and surplus aggregating \$3,000,000. These are among the staunchest institutions in the country, and enjoy the confidence of the entire business community.

TRANSPORTATION FACILITIES.

The Ohio river and its tributaries—Green, Wabash, Cumberland and Tennessee—are well supplied with packets that transport the products of these sections and distribute them in this great manufacturing center. The railroads centering here are the Evansville and Chicago, Peoria, Decatur and Evansville, St. Louis and Southeastern, Evansville, Henderson and Nashville, Evansville and Indianapolis Through Line, and Louisville, Evansville and St. Louis. The roads tap every desirable section of the country, affording ready and cheap transit for the immense manufactured products of the city.

MANUFACTURE AND COMMERCE.

As a manufacturing city, Evansville has but few equals and no superior. Her manufactories are numerous, and upon a large scale, and all doing a prosperous business. The principal branch is the manufacture of furniture. Seven large factories are operated, and representing over \$1,000,000 capital. The lumber trade is next in importance; fifteen sawmills and five planing mills are engaged in this branch. Its other manufactured products include plows and other agricultural implements, stoves, leather factory ware, woolen goods, cotton goods, staves and heading, barrels, beer, brass goods, iron castings, brick, boot and shoe uppers, washboards, boxes, carriages, tools, boilers, engines, machinery of nearly every description, chains, whips, soap, hominy, architectural iron work, sails, white lead, overalls, bagging, coffins, mattresses, and brooms.

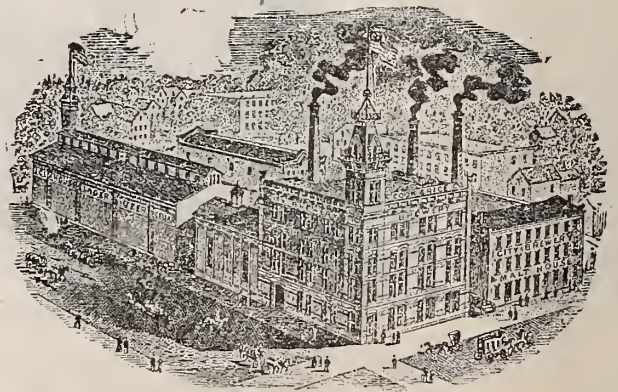
The city enjoys a large commercial business, has every line of merchandise represented by wholesale and retail houses, whose sales range from \$50,000 to \$1,000,000 annually. It has a mild and pleasant climate, beautiful location, and a business community that is noted for thrift and hospitality.

NOVELTY MACHINE WORKS AND FOUNDRY.—The above named works were established in 1857, and have been in operation ever since. The officers consist at present of F. Hopkins, president, and N. H. Miller, secretary and treasurer.

The works are equipped with the most improved tools and machinery, and have facilities for competing with any

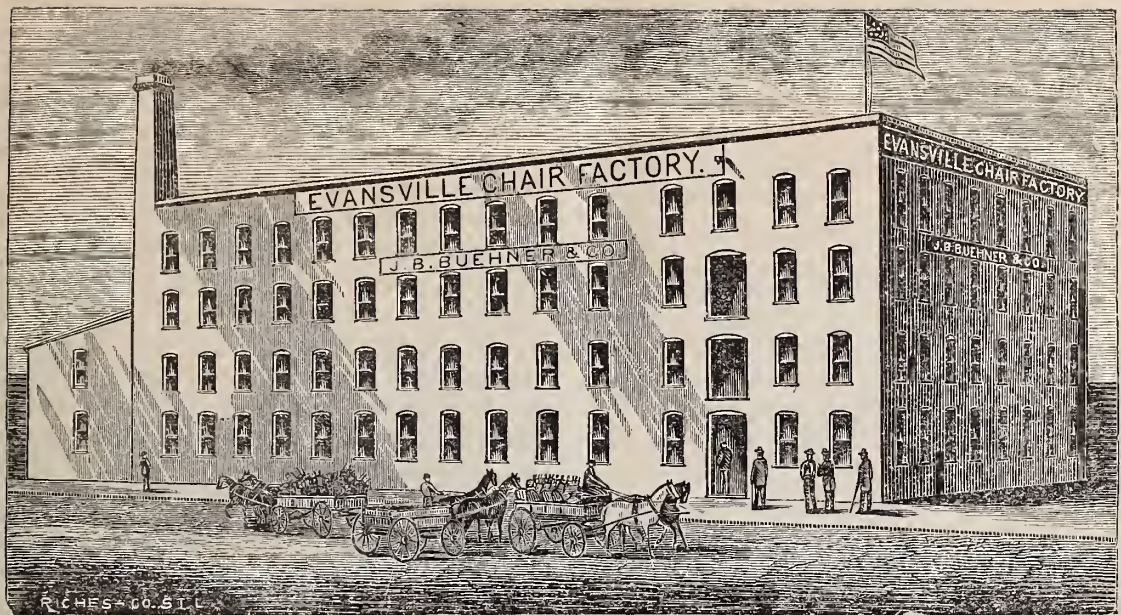
works of a similar character South or West. The works are large and commodious and embrace machine shop, foundry, blacksmith shop, boiler shop, etc. They employ at present about sixty skilled mechanics, making a disbursement necessary to this source alone of about \$400.00 per week. Their annual business transactions will reach about \$150,000.

They manufacture all sizes and varieties of stationary, marine and portable engines, steam boilers, feed pumps of several varieties; saw-mills, mill machinery, mill gearing, pulleys, hangers, shafting, couplings and castings of all kinds from the heaviest to the lightest. They also manufacture steam boilers of every description of the best iron or steel. Not one of their make of boilers was ever known to explode, which speaks well of their construction. Parties wishing anything in their line are requested to correspond with them, when answers to all inquiries will be cheerfully given. Their corps of officers and workmen in every department of their establishment is complete and efficient. Their friends and customers can rely upon being treated courteously by all connected with their shops.

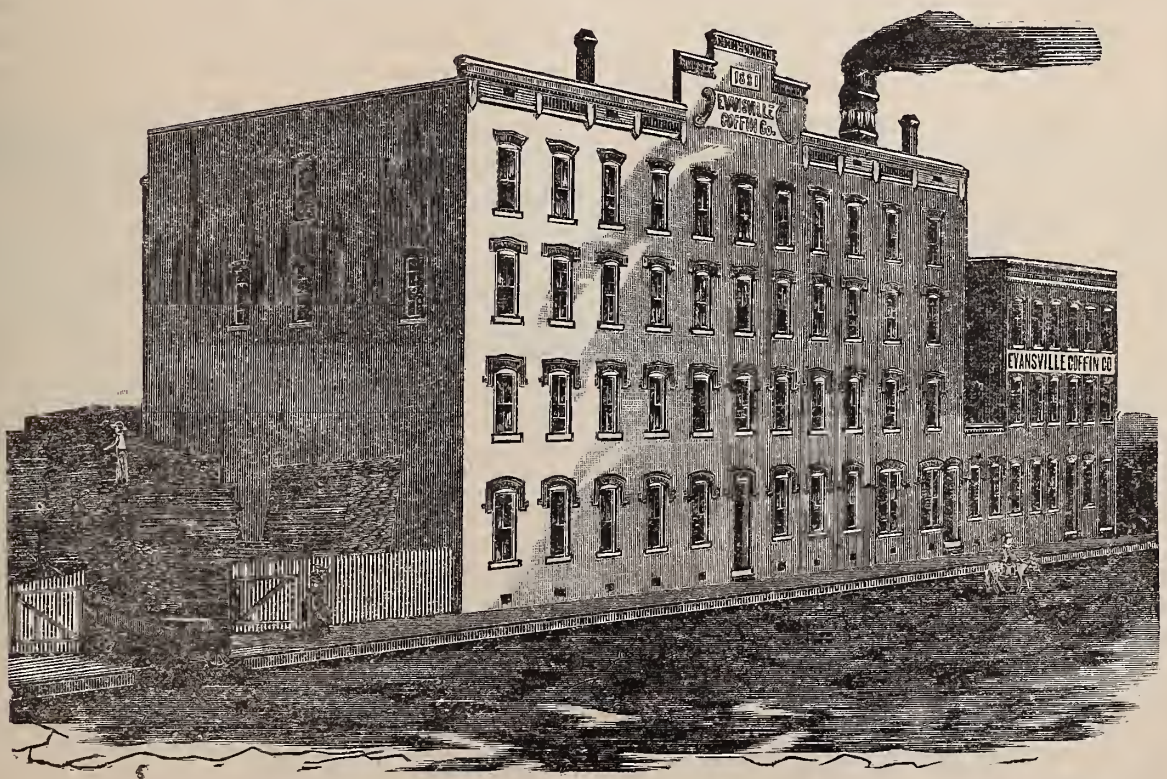


COOK & RICE, "CITY BREWERY."—Evansville is the brewing center of the southwestern portion of the State of Indiana. The city has become known generally throughout the country from the excellence and superior quality of the beer manufactured and put up by this firm.

In 1853 Mr. I. W. Cook, with Mr. Louis Rice, built the City Brewery with a cash capital of \$330, each of these gentlemen investing \$165. The site on which the brewery was built was then a corn-field. In the division of labor of the firm, the brewing fell to the lot of Mr. Rice, while Mr. Cook took charge of the financial and business portion of it. In 1857 Mr. Louis Rice sold his interest to Mr. Jacob Rice, Mr. Cook's step-father. The new firm immediately commenced the building of a larger beer cellar, and in 1858 brewed the first lager beer in Southern Indiana. In addition to the cellar, they added what was considered at that time an extensive malt-house. For over a quarter of a century has this firm name not only held but increased its reputation, which was in great part the capital on which



J. B. Buehner & Co.'s Chair Factory, Evansville, Ind.



Evansville Coffin Company, Evansville, Ind.

it started. It is hard to realize that the insignificant sum of \$330 in 1853 has so multiplied until it now represents upwards of a quarter of a million dollars. Some idea may be formed of its extent, value and increase over that which characterized it in 1853 by the following statement: It then had only a capacity of 100 barrels a week, and the buildings in which the brewings were made could have been put in the stable now used on the premises. To-day it has a capacity of over 1,000 barrels a week, and will, during the present year, be still further increased.

The malt-house has a malting capacity of 35,000 bushels, about one-third the amount used annually in the establishment. The bottling house is located in the first story of the malt house, where is bottled daily from twenty-five to thirty barrels of beer. The brewery, with ice machine house, malt house, stables and offices, cover the square bounded by Main, Sycamore, Seventh and Eighth streets. There are seventy-five hands employed in the brewery and bottling house. The sales for the current year will exceed 40,000 barrels.

J. B. BUEHNER & CO., the leading chair manufacturers of the Gate City, have one of the best known factories in the country, they gaining this pre-eminence by the indomitable energy of the proprietors to excel and out-distance all competitors. Every variety of chairs are manufactured here, such as the finest and most beautiful designs for parlor, dining-room and bed-room, with cane, rattan, Russian leather seats and backs, and carpet seat chairs. Everything used in their manufacture is the best quality, well seasoned, and a guarantee of durability is always given. They employ none but skilled workmen, and every part of the work is under the skilled eye of some member of the firm. Organized in 1864, this house is consequently one of the oldest and largest establishments in the country, and here is every modern improvement in machinery with which to carry on the business successfully. They do a very large wholesale business in Western and Southern States. Jno. B. Buehner, Manager; Geo. Veneman, Assistant Manager, and Bernard Holschner, Foreman, comprise the firm.

THE ARMSTRONG FURNITURE CO. was established by W. W. Armstrong at the age of 22 years, and in 1854, in a very small way, employing a few bench hands and no machinery. After almost three years of prosperity, and in 1856, the factory now occupied by the Mechanic Furniture Company, was built, which for a time was prosperous, but in consequence of depression of business in 1859 and 1860, failure and loss of trade caused by the civil war, &c., the factory plant and appurtenances were sold at sheriff's sale.

In 1862 a large warehouse was secured, and manufacturing in a small way was again commenced, which proved

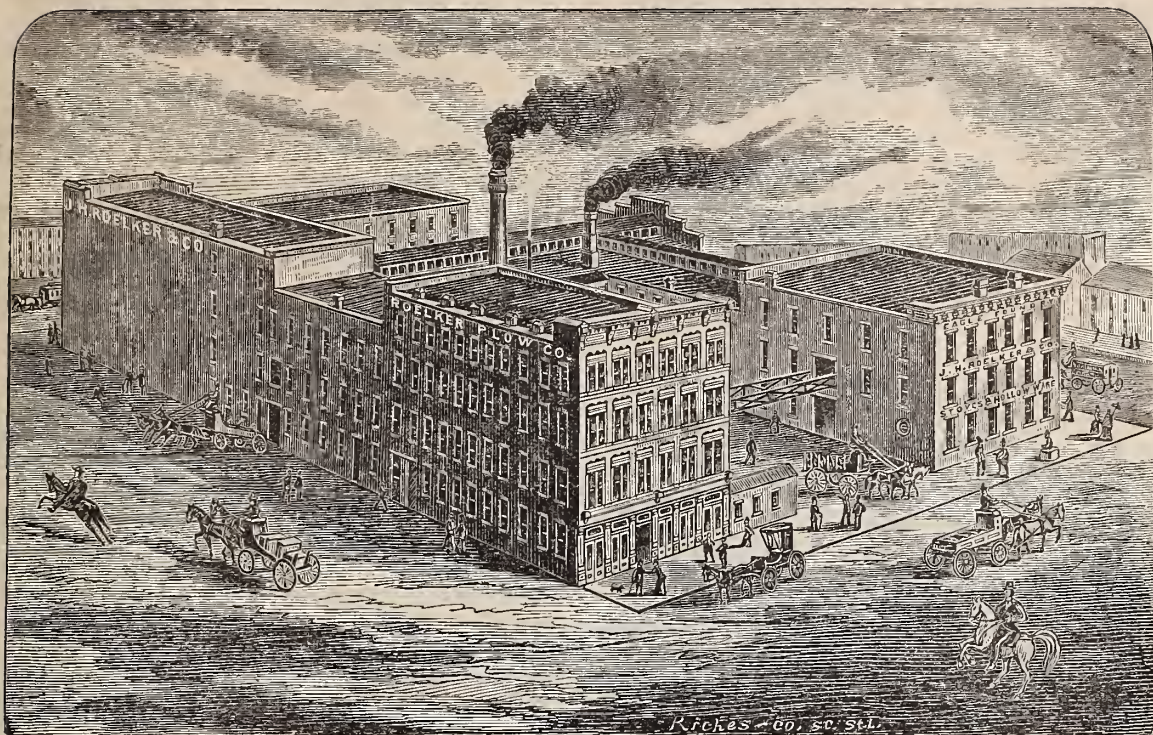
to be a success, and had enlarged the building and increased their capacity until in the year 1874 the firm was working 150 hands and doing a business of \$150,000 per annum. This year the Armstrong Furniture Company was incorporated. The old building was leased, and 5½ acres of ground purchased on Franklin street and ground broken, where now stands the old building, six stories, 160x160. In 1880, 1882 and 1883 they secured an additional 2½ acres, thus making eight acres for lumber yards &c., an addition known as their "new building," which is 112x60, five stories, thus making the building 262 feet long; also two size dry houses, saw-mill and other improvements and changes, and put in new machinery, until at the present time, notwithstanding the march of improvement, manufacturers give them the credit for having one of the best equipped furniture factories in the world. They employ 400 hands. Their sales reach almost a half million per annum, and their trade extends over the West and Northwest, East and South. Their goods are probably better known than those of any other manufacturer of furniture, particularly throughout the South and Southeast.

THE EVANSVILLE COTTON MANUFACTURING COMPANY started in 1866 with \$100,000 capital, and owned a mill in the heart of the city, but after eight years their increased business compelled them to enlarge their facilities, and they erected the factory they now occupy in the outskirts of the city. It is undoubtedly the model factory of the State, and one of the finest appointed manufacturing establishments in the country. It is owned and operated by a stock company. The capital stock at present is \$250,000; Wm. Heilman, President; E. B. Morgan, Secretary; R. M. Hobbs, Superintendent; Mackey, Nisbet & Co., agents for sale of goods.

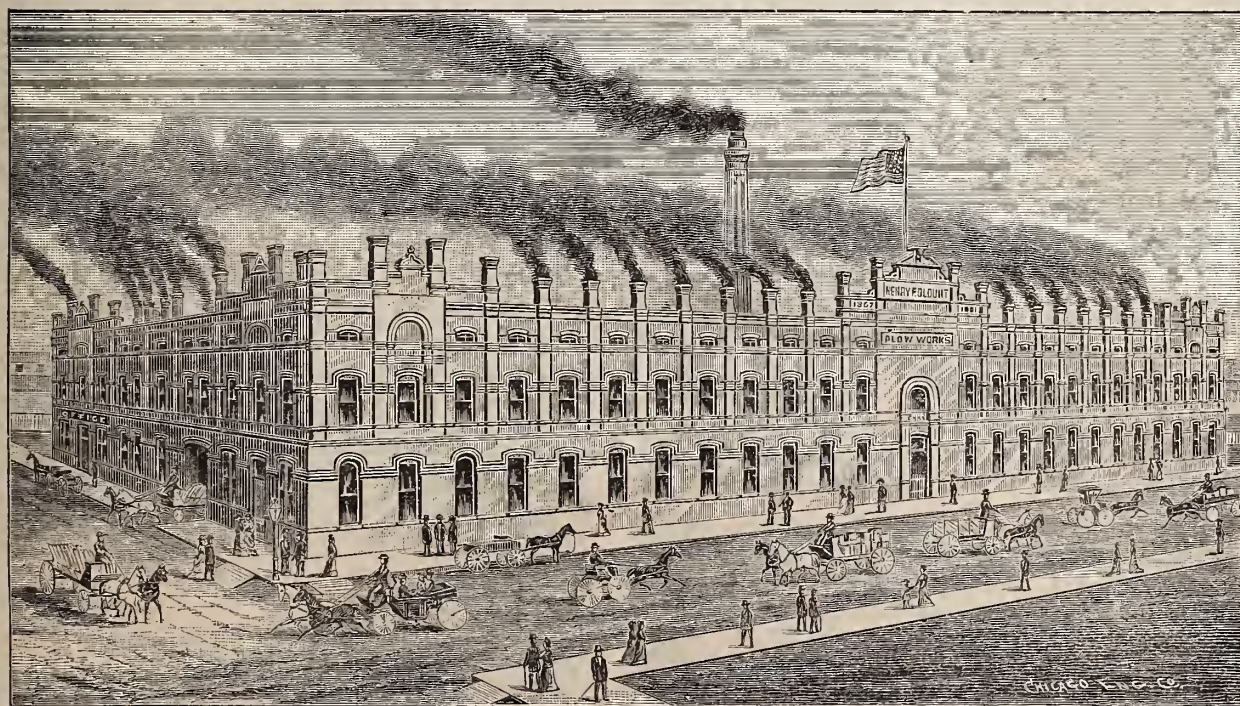
The capacity of the mill is 21,248 spindles, 600 looms, 6 batting or waste cards, employs 300 operators, and turns out daily 24,000 yards of cloth and 600 pounds of batting. The mill is run by two large engines of 650 combined horse-power. The main building is a large brick structure, four stories, or about fifty feet, in height, with commodious auxiliary buildings, such as offices, picker-room, ware-house, machine-shop, boiler-room, &c. The product of the mill is well known to the trade, and finds a ready market throughout the United States.

This institution is not only a credit to the city of Evansville, but it is an evidence of the general thrift and enterprise of the men who are to-day engaged in building up its manufactories. The company has built, for the convenience of its operatives, two large three-story brick tenement houses near the works.

Immediately after the erection of the new works the company made an exhibit of their products at the Centennial at Philadelphia in 1876, and was awarded the highest premium over all competitors, and in 1881 the company's exhibit achieved the same result at the Atlanta Cotton Exposition.



J. H. Roelker & Co.'s Plow and Stove Works, Evansville, Ind.



Henry F. Blount's Plow Works, Evansville, Ind.

PORTABLE AND STATIONARY ENGINES, &c.—
Kratz Bros., successors to C. Kratz, are engaged in the manufacture of portable and stationary engines, circular saw-mills, sorghum-mills, corn-shellers, and machinery generally. This establishment was begun in 1847 by Christian Kratz, now deceased, and Mr. Wm. Heilman. The capital was meagre, \$500 being the amount invested in the establishment of this enterprise that has since grown to such large proportions. The works are fitted with the latest improved machinery, and has facilities equal to any establishment of its character in the country.

THE EVANSVILLE COFFIN COMPANY, manufacturers of wood burial cases, commenced business in 1881. It is a stock company, incorporated with a capital stock of \$50,000. The works consist of three large brick buildings, embraced in 32,000 square feet, and employs about fifty operatives. The product of the works finds a market throughout the Middle and Southern States, and the sale of goods has rapidly increased since the commencement of the enterprise. The works are under the management of J. N. Knox. The officers are: J. W. Burtis, President; Will. H. Cutler, Secretary and Treasurer, with Charles Viele, J. W. Burtis, James H. Cutler and J. N. Knox as Directors. The raw material used in the product of the work is obtained at home, and with the abundant facilities afforded makes it possible for them to produce their manufactures at a figure that enables them to meet any competition. Besides manufacturing every variety of wood burial cases, the company are manufacturers and dealers in all kinds of undertakers' supplies. The trade throughout the South especially is solicited to examine the advantages offered by this company, believing that their equal can not be found elsewhere.

THE BLOUNT PLOW WORKS.—The beginning of the manufacture of the Blount Plow, in Eighteen Hundred and Sixty-seven (1867), was quite small, the daily output not exceeding fifteen or twenty plows, the building being 28x60 feet, and the power a small portable engine. The steady growth of the business compelled the leaving of the old place (which had been enlarged from time to time), in Eighteen Hundred and Eighty-one (1881), to the present location and into the magnificent establishment which is represented in the cut below. There may be plow works of greater capacity, but there are none in this country more complete in every department. The capacity of five hundred plows per day can certainly be fulfilled with as great comfort to every man employed as an enlightened judgment and careful appreciation of their wants could desire.

The fame of Blount's True Blue Plows is well established in the South and Southwest, and the rapid increase in the demand throughout the territory where they are known shows that they are either displacing other makes of plows or that the country is developing very rapidly. Nothing but crucible cast steel is used in either mold or point of these True Blue Plows, insuring at least double the service of those made from ordinary plow steel.

J. H. ROELKER & CO.—The members of this firm represent three district firms and business, viz.: J. H. Roelker & Co., manufacturers of cooking and heating stoves, stove and country hollow ware, and wholesale dealers in tinners' stock; Roelker Plow Co., manufacturers of the "Famous" and "Hoosier" steel plows (with extra point), new ground plows, wood and iron beam double-shovels, cotton scrapers, cotton sweeps, rolling coulters, &c.; Roelker Bros., manufacturers of plain tin-ware, and wholesale dealers in stoves and house-furnishing goods.

J. H. ROELKER & Co.—The senior member, Mr. J. H. Roelker, after learning his trade in Cincinnati, and filling important positions in prominent foundries in that city, started in the foundry business in Evansville, Ind., in 1854. Starting upon a small scale, he has, by close and personal attention to the manufacturing department, built up the largest stove works in the State, manufacturing a line of stoves equal to any foundry in the West, the finish, durability and neatness of design not being excelled by any foundry, either East or West.

Their present line of stoves comprises two hundred and thirteen different sizes, adapted and suitable to the wants of the South and Southwest. Their line of stoves and country hollow-ware are also very complete, manufacturing such styles and sizes as are demanded by the trade. In their tinners' stock department they carry a complete stock of tinners' tools, machines, tin plate, sheet iron, stamped ware, granite iron ware, &c., and aim to carry a full line of goods required by a stove and tin house.

ROELKER PLOW CO.—The members of the firm of J. H. Roelker & Co. compose this company. They confine themselves to the manufacture of steel plows and implements. They commenced business in 1876, and have ever made it their aim to manufacture the most durable and easiest running plow possible to be made. Their increased sales from year to year have proven their success. They manufacture their "Famous" series in nine sizes and their "Hoosier" in four sizes. They manufacture both wood and iron beam plows; also wood and iron beam double shovels, single shovels, new ground plows, cotton scrapers, cotton sweeps, rolling coulters, and the different attachments needed.

The plant of J. H. Roelker & Co. and the Roelker Plow Co. comprise 300x300 feet facing Main, Sycamore, Fifth and Sixth streets, almost the entire space being covered with large buildings necessary to their wants. Their business has increased so rapidly that during the past seven years at least one addition has been made each year, so that now their works embrace thirteen substantial brick buildings as follows: Office and warehouse (3-story), sample rooms and warehouse (4-story), tinners' stock department (2-story), original foundry building, first addition to foundry, second addition to foundry and warehouse (4-story), third addition to foundry and warehouse (4-story), mounting rooms and warehouse (3-story), blacksmith shop, boiler and engine room, stable, plow factory and warehouse (4-story), retail department (3-story). The cut, as shown, of their works does not give their entire works as they now stand.

ROELKER BROS. manufacture a full and complete line of plain tinware of the best quality and approved patterns; are also wholesale dealers in stoves, hollow-ware, stamped ware and house furnishing goods. Their works and sample rooms are situated at No. 11 Upper First street.

RICHMOND.



This city, the largest in Wayne County, is among the leading commercial centers of the State, and is one of Indiana's finest cities. It is substantially built, is surrounded by one of the richest agricultural sections in the Northwest, has ample railroad facilities and is enjoying a large and healthy commerce. We know of no other town of its class in this part of the Union that so impresses the stranger with its metropolitan manners or go-aheaditiveness, yet it is plain to be seen that business is conducted on a solid, conservative basis which we attribute to the predominance of an element composed principally of members of the Society of Friends, whose antecedents were the original settlers here.

EARLY HISTORY.

It was in the latter part of 1806 that the settlement of Richmond was commenced, much of the land in its vicinity having been taken up in that year. David Hoover and his companions are supposed to have been the first white men who explored the territory north of Richmond. The land was settled principally by the Friends, from North Carolina, some of them from that State direct, others after a brief residence in Ohio.

THE CITY'S GROWTH.

The date of the birth of the town is generally supposed to have been in 1816; it had no corporate existence however until after Cox's addition in 1818, which embraced lands north of Main St., and west of Marion. In conformity to an act of the legislature, the citizens met on September first of the same year, and unanimously declared themselves in favor of the incorporation of a town. Twenty-four votes were polled. On the 14th of September, at an election held at the same place, Ezra Boswell, Thomas Swain, Robert Morrison, John McLane and Peter Johnson were elected trustees. The authority given to the trustees by the general act under which the town was incor-

porated being deemed inadequate, the citizens petitioned the legislature for a special charter, which was granted. The charter was adopted by a vote of the citizens, and borough officers elected March 13th, 1834. Richmond was governed under this borough charter until 1840, when it was incorporated as a city under a charter adopted by the citizens, and on the 4th of May a mayor and other city officers were elected. In 1865 a general law was passed authorizing the people of any town to establish a city government without a special act of the legislature. Under this law city officers are elected for two years. The city is now divided into five wards with two councilmen from each ward. It also has a complete fire department and a system of fire alarm boxes. The population was 200 in 1818; 824 in 1827; 3,800 in 1850; 12,743 in 1880; while at the present time it is fully 15,000 and rapidly increasing.

CHURCHES AND SCHOOLS.

A meeting of the Society of Friends was established here as early as 1807. The first meeting of the M. E. church was in 1819, Presbyterian 1837, English Lutheran 1853, Catholic 1846, Episcopal 1838, German Evangelical 1845, African M. E. 1836. Other denominations here are the Baptist, Evangelical, Christian, Swedenborgian and United Presbyterian, which are represented by more than 20 different congregations, some of whom occupy edifices that would be a credit to any city. The educational advantages of Richmond are its pride and boast. A thorough graded system has been adopted, 10 school buildings being used and the services of over 50 teachers required. Within one mile of the city on the National road, stands Earlham College, an institution owned by the Friends, having 160 acres of land in connection with its attractive buildings. There are most complete courses of study and both sexes are admitted to equal privileges and opportunities.

PUBLIC LIBRARY.

Robert Morrison, an early settler here and one of Richmond's most prominent and successful business men, founded the fine public library that bears his name. Believing such an institution would conduce to the public good, he purchased a lot and erected a fine building containing library room, dwelling of librarian, etc. The cost of lot and improvements was \$12,500, the total donation however was \$18,000, all of which he devised to Wayne Township, of Wayne County, Ind., in trust, for the benefit of the inhabitants of said township for ever. It opened in 1864 with 6,000 volumes which have since been increased to 10,000.

MANUFACTURING.

Richmond is indeed a thriving manufacturing city and no other place of its size in the State contains so many important and thriving manufacturing concerns, which fact explains its rapid progress. In 1827 Geo. B. Rowlett came here from Philadelphia, Pa. This gentleman was instrumental in making one of the first attempts at manufacturing here, which was the production of silk from the cocoon, but he was compelled to abandon the enterprise. Since then one factory after another has been started until to-day we find here some of the largest concerns in the Union engaged in the manufacture of farm implements,

mill machinery, coffins, school furniture, etc. The wholesale and jobbing trade is quite extensive, several large concerns being located here. The shipping facilities are unsurpassed, the railroads centering here being the Pan Handle, from Pittsburgh to Indianapolis; Grand Rapids & Indiana, from Richmond through Ft. Wayne into Michigan; the Chicago Division of the Pittsburgh Cincinnati, & St. Louis R. R., and the Cincinnati, Richmond & Dayton R. R., giving shippers the benefit of competing lines north, south, east and west. In conclusion, we can truthfully say that no point in the west offers greater inducements for those seeking a location than does Richmond.

In following series of brief descriptive articles, to which the attention of the reader is particularly invited, will be found a large amount of useful and practical information of the highest value. Through the medium of careful and competent reporters a detailed review of the manufacturing and mercantile interests of Richmond has been prepared and dwelt upon in separate articles, thus more fully reaching the objects of this work. From these much valuable information will be imparted with reference to this city; its advantages as a market for the purchase of supplies, its opulent and enterprising business concerns (none of which have been willingly omitted) and the striking diversity of its resources.



MORTON MONUMENT, INDIANAPOLIS, IND.

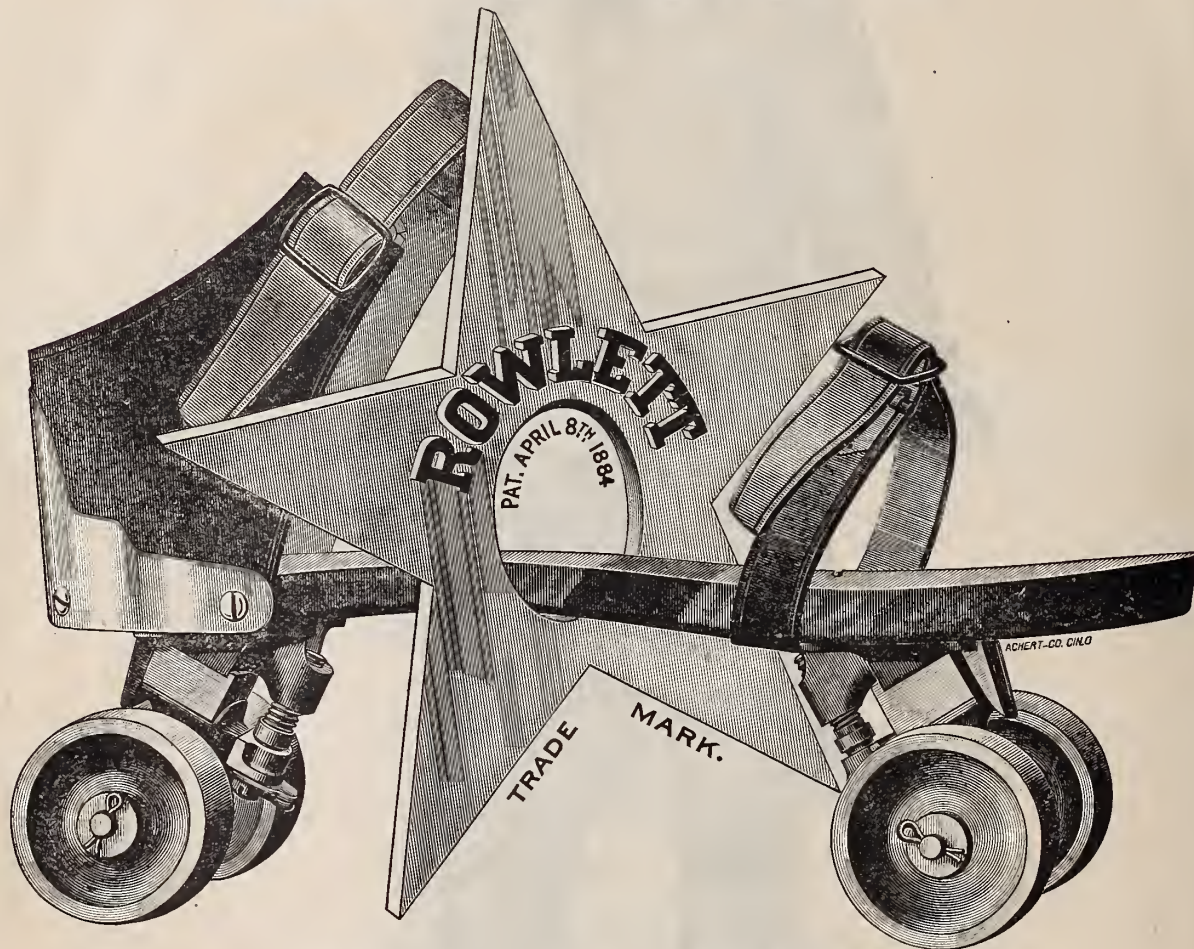
ROWLETT'S "STAR" ROLLER SKATE.

NORTHWESTERN HARDWARE CO.,

92 Lake St., Chicago, Ills.

101 Reade St., New York City.

— SOLE AGENTS. —



WE CLAIM FOR THIS SKATE

Lightness, Perfect Adjustability, Perfection of Mechanism, Ease of Running and Durability,

ALL TENDING TO MAKE WHAT WE CLAIM FOR THE "STAR," THE PERFECT SKATE. •

Several ounces lighter per pair than any Skate made.

The tension can be regulated instantly, WITHOUT REMOVING THE SKATE FROM THE FOOT.

For Rink use, it meets all the requirements of the most fastidious, and excels all competitors.

For Expert use, nothing yet invented can approach it. Acknowledged to be the FASTEST SPEED SKATE ON THE MARKET.

The "Star" can be turned in a 23-inch circle, with all wheels on the floor.

The admirable running qualities of this Skate, together with the elastic tension, capable of delicate adjustment, make it a favorite with LADIES AND CHILDREN, avoiding all tiresome straining of the muscles, and rendering skating truly the "poetry of motion."

Every Skate, and every part of every Skate, thoroughly tested before leaving the factory. We claim superiority of all material used in the manufacture of these Skates.

Prompt care given to all orders.

Price, (Sample Pair) \$3.00.

GENTLEMEN: We wish to thank you for the many orders we have received from you in the past, and take this opportunity to advise you that we have made arrangement with the NORTHWESTERN HARDWARE Co. to market our production. You will please address all communications to them in the future. Trusting that their relations with you will be as pleasant in the future as ours have been in the past, and wishing you success in your sales of the Rowlett "Star" Roller Skate, we are,

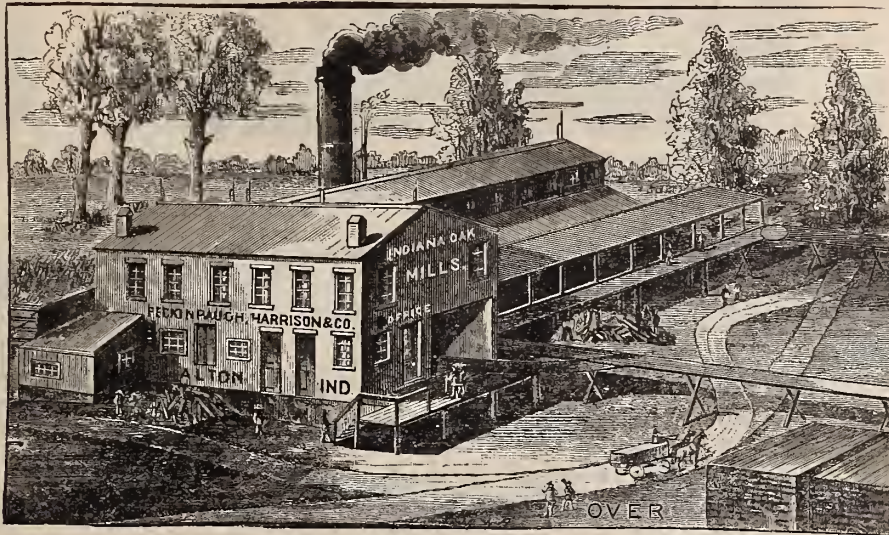
Very truly,
In connection with the above we desire to say we are now prepared to fill all orders for the Rowlett "Star" Roller Skates with reasonable promptness, and solicit your orders for these Skates. Please address all communications for prices and terms, &c., to our offices, as we will carry a large stock on hand for prompt delivery,

RICHMOND, Ind., Jan. 7, 1885.

CHAMPION ROLLER SKATE & WAGON CO.
THE NORTHWESTERN HARDWARE CO.,
92 Lake St., Chicago, Ills.; 101 Reade St., New York.

PECKINGPAUGH, HARRISON & CO.,

Indiana Oak Mills, Alton, Ind.



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*Hounds, Felloes, Spokes, Hubs, Shafts, Sills, Lounges, Railing, Plow Beams,
Coupling Poles, Plow Slides, Single and Double Trees,
Railing Standard, Laths, Etc.*

WHITE OAK CUT TO SIZES.

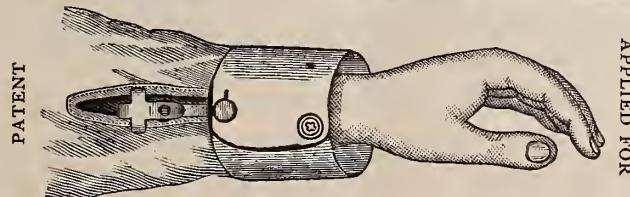
OUR DRUMMER FOR 1885.

AGENTS WANTED EVERYWHERE

To Sell the Latest 25 Cent Novelty.

It is not our aim to appear loud, long or windy in saying our piece, but simply to the point and in a quiet way. At your leisure examine the

MODEL CUFF AND SLEEVE ADJUSTER.

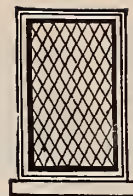
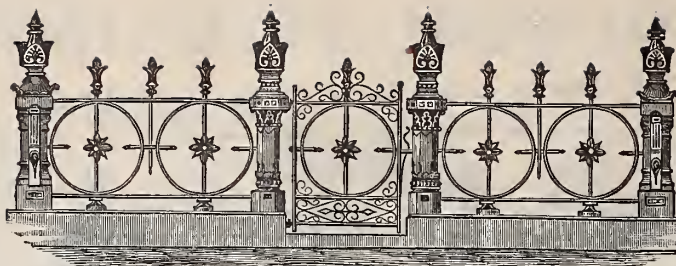


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The best article for the purpose ever made. Will do its work and give perfect satisfaction. There are no Rights and Lefts—will fit either sleeve. The swivel button that enters into the Cuff, as well as the clasp that fastens into the slit of your sleeve, are positive fasteners. They cannot come loose. Every pair is warranted to be just as represented.

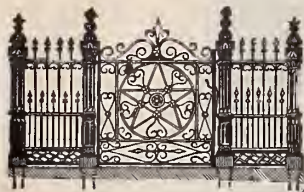
A sample pair will be mailed to any address on receipt of a 25 cent Postal Note or Order. To the general trade a reasonable discount is allowed. All questions or communications cheerfully answered. Address,

THE MODEL CUFF ADJUSTING CO.,
BRAZIL, IND.



J. H. MESKER & CO.,

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Wrought Iron Fence.



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*Fencing,
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Balconies,*



*Settees,
Guards,
Screens,
Chairs,
Signs,*



Wire Counter Railing.

*Elevators,
Fenders,
Awnings,
Gratings,
Shutters,
Riddles,
Sieves,
Baskets,
Stairs,
Etc.*



Cor. Fourth & Division Sts.,



Evansville, Ind.

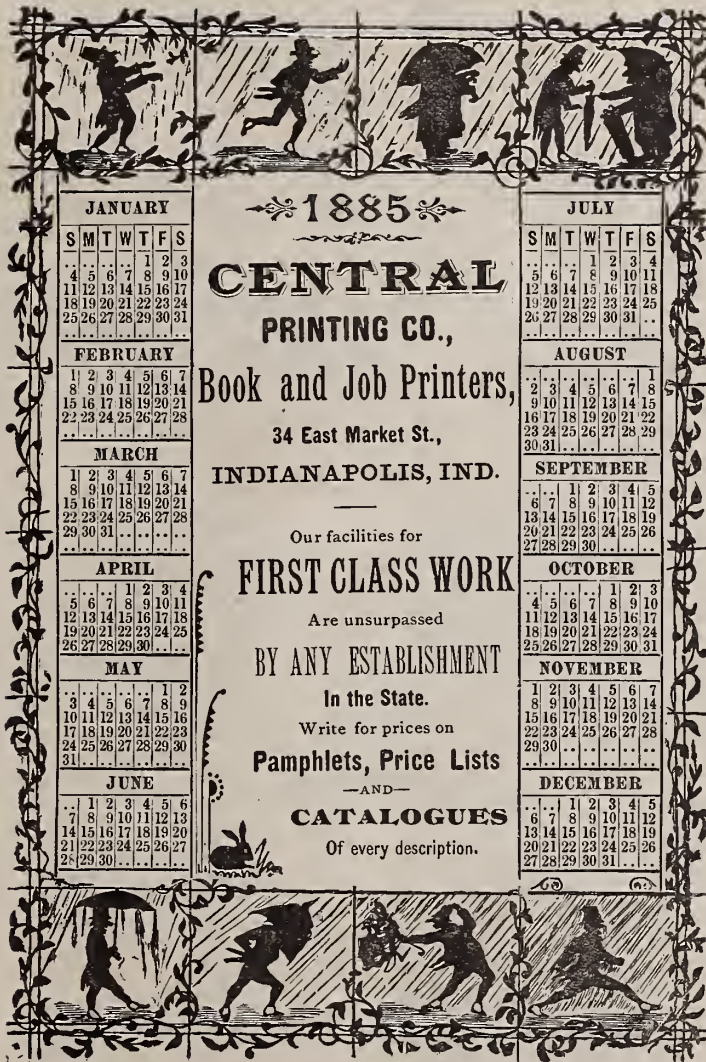
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The "Everlasting" is round faced, no corners to catch ; superior carrying and emptying capacity, with patent malleable iron lip. Outwears any bucket in the market. The "Boss" has an oval front, and square bottom. Light, strong and durable ; lip can be attached if desired. The "Keystone" is as near perfect as a square cup can be. The corners are rounded, with double bottom, and substantially made. Prices as low as ordinary buckets. Best of testimonials. Sold to mill furnishers generally. Order from your furnishers or of us direct. They pack closely. Elevator Bolts at manufacturers' prices.

— THE —
EVERLASTING ELEVATOR BUCKET CO.,

Terre Haute, - Indiana.



JANUARY

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JULY

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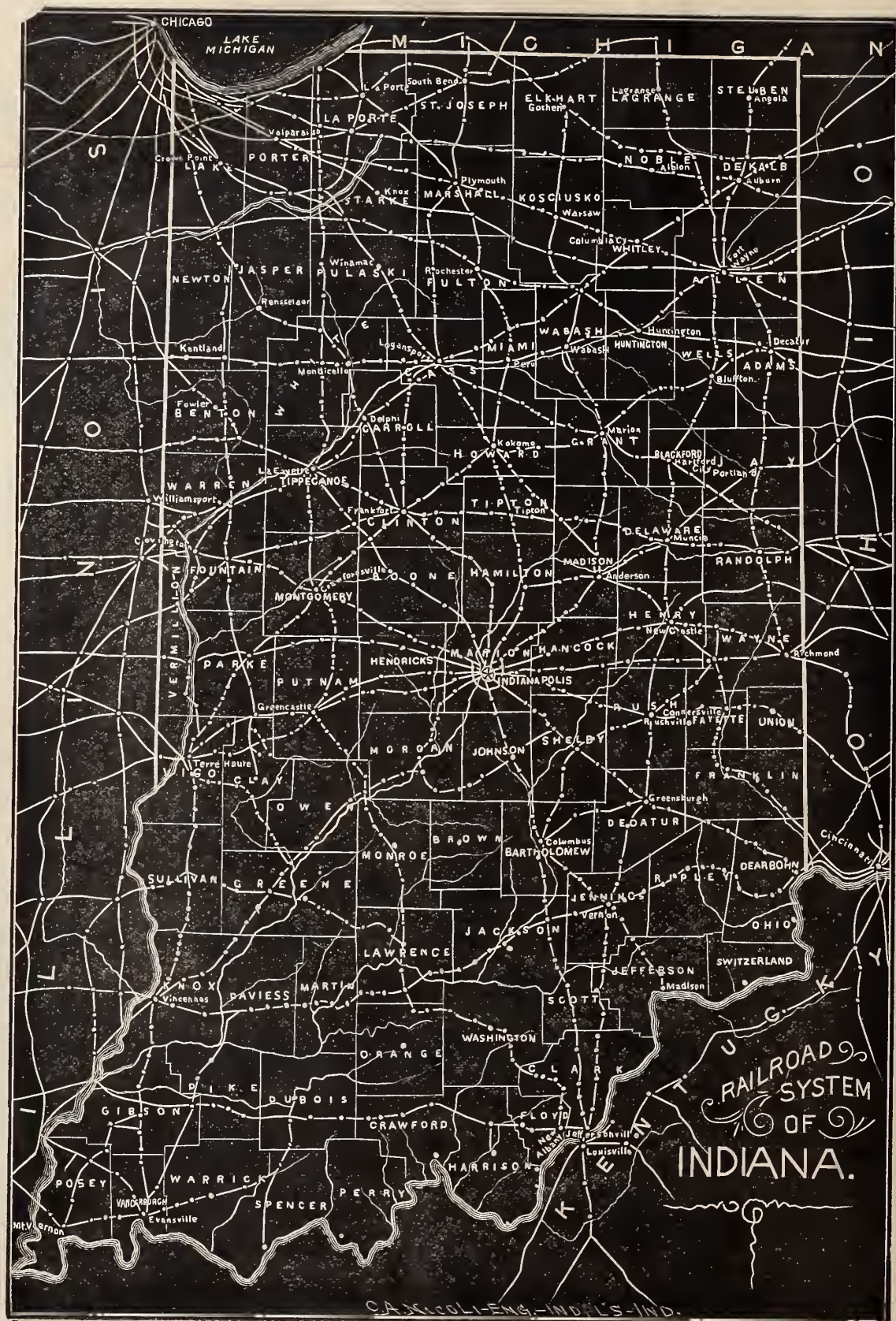
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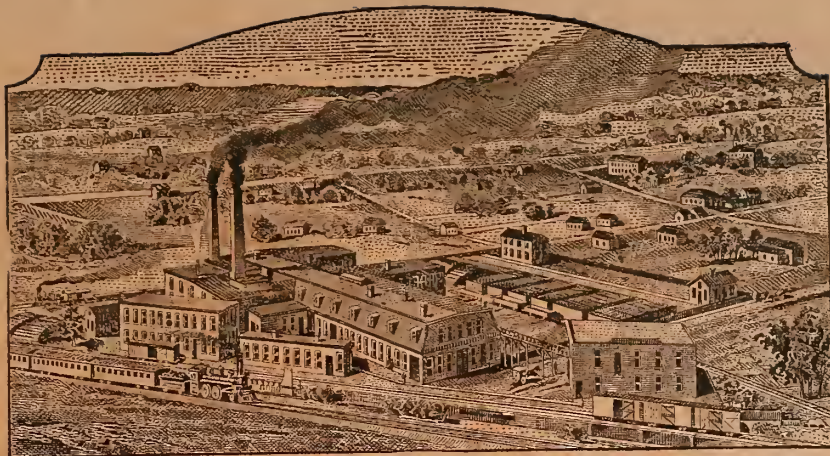


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UDELL

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Works,



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Ind.,

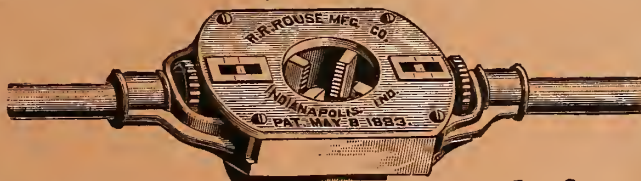
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No. 1 represents the Point before receiving the FILTER COVERS, the perforations being $1\frac{1}{4}$ by $\frac{3}{4}$ inch.
No. 2 shows the Point complete with Composition Wire Screen and very heavy perforated brass.



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